

PSYCHOLOGICAL ABSTRACTS

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GENERAL

(incl. Statistics)

1. Allan, D. M. The causal dilemma in the mind-body problem. *Psychol. Bull.*, 1939, 36, 615.—Abstract.
2. Alverdes, F. Die Bedeutung der Begriffe Finalität, Zweckmässigkeit und Sinn innerhalb der Biologie. (The meaning of the concepts of finality, purpose, and sense in biology.) *Forsch. Fortsch. dtsh. Wiss.*, 1939, 15, 303-305.—Recognition of the finality of life does not necessarily lead to vitalism. Rather, both the human and the animal individual are to be considered as psychophysical unities. The objection that finality exists only in the psychic is false. It comes from the time when body and psyche were considered distinct from each other, when psyche and consciousness were equated, and consequently only a psychology of consciousness was recognized. But now the subconscious can also have a final action. Body, the subconscious, and consciousness are only different expressions of the organism functioning as a whole. Concepts of purpose arise from the immanent life-finality of our human nature. Finality, however, is not derived from purpose. The investigation of causality in living beings ought not to content itself with a "feltwork of causal threads." Within the complex happenings of life the factors never work lineally but always integrally.—P. L. Krieger (Leipzig).
3. [Anon.] Intermediate statistics. Milwaukee: Pergande Publ. Co., 1939. Pp. 112. \$2.00; \$1.50.—"This book was designed primarily to provide a concise text for original study or for rapid review for persons planning to write civil service examinations such as junior financial or junior agricultural statistician." The book covers the following topics: averages, measures of variability, comparison of frequency distributions, time series analysis, measures of associations or correlation. Appended are miscellaneous formulae and a description of the use of logarithms.—J. McV. Hunt (Brown).
4. Avery, G. T. Thomas Russell Garth: 1872-1939. *Amer. J. Psychol.*, 1939, 52, 479.—A brief sketch of the life and major interests of T. R. Garth.—D. E. Johannsen (Skidmore).
5. Beck, L. W. The concept of wholeness in ethics. *Psychol. Bull.*, 1939, 36, 592.—Abstract.
6. Berry, K. K. The relation of the Aristotelian categories to the *Logic* and the *Metaphysics*. *Psychol. Bull.*, 1939, 36, 602-603.—Abstract.
7. Bierl, R. Ein Beitrag zur Theorie der Schallplatte: der Abtastvorgang. (A contribution to the theory of phonograph records: the process of investigation by touch.) *Akust. Z.*, 1939, 4, 261-262.—Lateral-cut recording is inferior in several respects to vertical-cut recording.—P. L. Krieger (Leipzig).
8. Boas, G. Habit, fact, and value. *J. Phil.*, 1939, 36, 526-530.—Terminal values grow out of obsolescent instrumental values. Means become ends, and objects which have always been thought of as tools finally become *objets d'art*. The bridge between fact and value is erected by habit, for there is probably no terminal value, moral or esthetic, that has not been successfully criticized by reason. Once established, a habit becomes compulsive, seems self-justified to the performer, and offers no proof of utility. Smooth performance is about all that is required for happiness: whatever has always been, is right. The compulsive character of the habits when they have become terminal values forces individuals into rituals, and if prevented they give all the symptoms of remorse and guilt.—J. G. Miller (Harvard).
9. Bottome, P. Alfred Adler, a biography. New York: Putnam's, 1939. Pp. 324. \$3.00.—The author gives an insight into Adler's personality, his life history, and some phases of his psychological contributions. The volume contains various portraits of Adler, memorial addresses by L. Sicher and by a "professor of education," and bibliographical material.—W. S. Hunter (Brown).
10. Brandenstein, B. v. Die Gestalt des persönlichen Geistes. (The pattern of the personal mind.) *Forsch. Fortsch. dtsh. Wiss.*, 1939, 15, 131-134.—How is the paradox of full consciousness in the unconscious, a single ego with two consciousnesses, comprehensible? It is resolved in connection with another paradox, viz., the mind-soul processes, which show no physical aspect, but are nevertheless bound, singly and together, to the normal organization of life, especially of the central nervous system. This shows that our immediately experienced consciousness is a psychophysical reality, the physically bound consciousness of the body-soul being, man. In this "human consciousness" there can exist only so much as is directly based on the physiological. The psychic basis of this physiologically limited consciousness is the fully conscious, which from the mental side establishes the limited "human consciousness," and can also be so understood.—P. L. Krieger (Leipzig).
11. Brinton, W. C. Graphic presentation. New York: Brinton Associates, 1939. Pp. 512. \$5.00.—This book is a compendium of graphic methods. Starting with a brief history of the development of graphic methods, the author presents 60 chapters covering approximately all of the various forms of

graphs, pictorial charts, graphic narratives, quantitative cartoons, and various problems connected with the use of graphic methods, such as methods of printing, selection of paper, use of color, binding techniques, etc.—*J. McV. Hunt* (Brown).

12. Bruce, R. H. Proceedings of the eighth annual meeting of the Rocky Mountain Branch of the American Psychological Association. *Psychol. Bull.*, 1939, 36, 663.

13. Brüel, O. Sigmund Freud. *Ugeskr. Laeg.*, 1939, 101, 1181-1182.—Obituary.—*N. J. Van Steenberg* (Iowa).

14. Carmichael, P. A. Examination of a logical positivist. *Psychol. Bull.*, 1939, 36, 604-605.—Abstract.

15. Cassirer, E. Le concept de groupe et la théorie de la perception. (The concept of groups and the theory of perception.) *J. Psychol. norm. path.*, 1938, 35, 368-415.—This is a discussion of certain relationships between modern mathematics and logic, on the one hand, and theories of perception, Gestalt theory, color constancy, etc., on the other. The application of certain mathematical speculations connected with the concept of groups to psychological problems is traced back to the work of Helmholtz. The contributions of Kant, Poincaré, Klein, Katz, etc., are then discussed.—*R. E. Perl* (New York City).

16. Clements, F. E., & Shelford, V. E. *Bioecology*. New York: Wiley, 1929. Pp. 425. \$4.50.

17. Crissy, W. J. E. The effect of partialling on the Thurstone factor method. *Psychol. Bull.*, 1939, 36, 608.—Abstract.

18. Davenport, C. K. The field and method of the philosophy of science. *Psychol. Bull.*, 1939, 36, 603-604.—Abstract.

19. Davis, F. C. Proceedings of the Western Psychological Association, Stanford University, California, June 23-24, 1939. *Psychol. Bull.*, 1939, 36, 639.

20. Emme, E. E. An analysis of the content of recent textbooks in general psychology. *Psychol. Bull.*, 1939, 36, 623.—Abstract.

21. Fisher, R. A., & Yates, F. *Statistical tables for biological, agricultural and medical research*. London: Oliver & Boyd, 1938. Pp. 90. 12/6.

22. Geldard, F. A. "Explanatory principles" in psychology. *Psychol. Rev.*, 1939, 46, 411-424.—Two opposed theories as to the task of science are (1) that it should content itself with description, and (2) that it should set up a unified structure, with rules for relating facts, and should give explanatory principles. The author holds that an examination of so-called explanations shows them to consist simply of further descriptions, their aptness depending on the intimacy of their relation to the facts being explained. To the systematic scientist, all must be explained in terms consistent with his prior knowledge or with a logical regimen which he has adopted. But there are pitfalls in the exclusive employment of a single limited point of view. For the psychologist,

many of his facts lead quite naturally to explanation in physical, chemical, anatomical, or physiological terms. Our contemporary problems seem to yield best to known neurological facts and principles. But this is merely extended description.—*A. G. Bills* (Cincinnati).

23. Gordon, K. The Epicurean theory of imagination. *Psychol. Bull.*, 1939, 36, 648-649.—Abstract.

24. Guilford, J. P. The fourteenth annual meeting of the Midwestern Psychological Association. *Amer. J. Psychol.*, 1939, 52, 475-476.—*D. E. Johannsen* (Skidmore).

25. Guilford, J. P. Proceedings of the fourteenth annual meeting of the Midwestern Psychological Association. *Psychol. Bull.*, 1939, 36, 622.

26. Hamburger, F., Jr. An inexpensive voice relay for use with the electronic chronoscope. *J. exp. Psychol.*, 1939, 25, 319-322.—Detailed descriptions of all components, with wiring diagrams, are given.—*H. W. Karn* (Pittsburgh).

27. Harris, M. S. Motse and Hobbes. *Psychol. Bull.*, 1939, 36, 613.—Abstract.

28. Hayes, S. P., Jr. Converting percentage differences into tetrachoric correlation coefficients. *J. educ. Psychol.*, 1939, 30, 391-396.—A table is presented which facilitates rapid calculation of tetrachoric coefficients. A column from which the probable errors of the coefficients can be determined is included.—*R. M. Bellows* (Maryland).

29. Hecke, B. Die Tierseele auf der Grundlage der grundwissenschaftlichen Philosophie und der Psychologie von Johannes Rehmke. (The animal mind on the basis of the basic scientific philosophy and psychology of Johannes Rehmke.) Greisswald: Bamberg, 1939. Pp. 304. RM. 12.

30. Heinlein, C. P. Proceedings of the thirty-fourth annual meeting of the Southern Society for Philosophy and Psychology. *Psychol. Bull.*, 1939, 36, 587-591.

31. Holman, L. J. *Simplified statistics*. London: Pitman, 1938. Pp. xii+142. 3s. 6d.—Basic statistical concepts useful in natural science, commerce, and everyday life are given, with little use of algebra and statistical theory.—*O. W. Richards* (Spencer Lens Company).

32. Jenkins, I. Plato and the dilemma of literary criticism. *Psychol. Bull.*, 1939, 36, 610.—Abstract.

33. Johnson, H. M. Rival principles of causal explanation in psychology. *Psychol. Bull.*, 1939, 36, 612.—Abstract.

34. Kalif, G. T. Metaphysics and the scientific method. *Psychol. Bull.*, 1939, 36, 604.—Abstract.

35. Kuhn, H. Factual and valuational judgments in ethics. *Psychol. Bull.*, 1939, 36, 594.—Abstract.

36. Lecomte du Noüy, P. Das Altern und die physiologische Zeit. (Ageing and physiological time.) *Z. Altersforsch.*, 1939, 1, 301-309.—The young and the old living in the same environment exist in reality in separate universes in which the value of time is basically different. For a 4-year-

old child, one year equals one fourth of his existence; for a person of 50, however, it is only one fiftieth. The difference in these rhythms makes any real contact impossible. Psychology has not sufficiently recognized the important meaning of physiological time for its practice.—*P. L. Krieger* (Leipzig).

37. Lee, H. N. A precise meaning for objective and subjective in value theory. *Psychol. Bull.*, 1939, 36, 593-594.—Abstract.

38. Levine, S. M., & Dornblum, A. The implications of science as a logical system. *Amer. sociol. Rev.*, 1939, 4, 381-387.—A general discussion, with special reference to the social sciences.—*I. L. Child* (Harvard).

39. Liddell, A. F. Soul as process in the philosophy of Plato. *Psychol. Bull.*, 1939, 36, 613-614.—Abstract.

40. Martin, A. H. Psychology in outline. Sydney, Australia: Dymock's Book Arcade, 1939. Pp. 127. 7/6.—An eclectic combination of text- and workbook for beginning students in psychology.—*H. D. Spoerl* (American International College).

41. McNemar, Q., & Biel, W. C. A square path pursuit rotor and a modification of the Miles pursuit pendulum. *J. gen. Psychol.*, 1939, 21, 463-465.—Following a description of the apparatus, reliabilities for the pursuit rotor and the pendulum are reported.—*C. N. Cofer* (Brown).

42. Miller, J. G. Symbolic technique in psychological theory. *Psychol. Rev.*, 1939, 46, 464-480.—Psychology has reached the stage where the experimental data are far more accurate than the theoretical treatment accorded them, because of the failure to use rigid logical symbolic formulations. Hull has done much to bring careful theoretical techniques into psychology, but a number of false assumptions can be shown to have crept into his "theoretical systems," due to his failure to use a symbolic regimen. The terms used in his postulates are not carefully defined. When several of Hull's specific terms, such as "reinforcing state of affairs," "experimental extinction," "frustration," "seeking," "attempt," "discouragement," etc., are translated into symbolic terms, some of the logical inconsistencies in his arguments are apparent.—*A. G. Bills* (Chicago).

43. Morgan, G. A., Jr. Individualism in the philosophy of Nietzsche. *Psychol. Bull.*, 1939, 36, 593.—Abstract.

44. Most, O. J. Die Determinanten des seelischen Lebens. (The determinants of psychic life.) Breslau: Franke, 1939. Pp. 312. RM. 9.60; 12.

45. Niederhöffer, E. v. Einsichtswissenschaft und Anwendungswissenschaft. (Theoretical and applied science.) *Z. Menschenk.*, 1939, 15, 61-71.—The author examines the opposed word-pair "theory-practice" on the basis of the psychophysical relations of thought, and, following L. Klages' viewpoint, justifies the better contrast of theoretical and applied science.—*P. L. Krieger* (Leipzig).

46. Oberly, H. S. The tenth annual spring meeting of the Eastern Psychological Association. *Amer. J. Psychol.*, 1939, 52, 473-475.—*D. E. Johannsen* (Skidmore).

47. Oberly, H. S. Proceedings of the tenth spring meeting of the Eastern Psychological Association. *Psychol. Bull.*, 1939, 36, 652-653.

48. Ruyer, R. Le paradoxe de l'amibe et la psychologie. (The paradox of the amoeba and psychology.) *J. Psychol. norm. path.*, 1938, 35, 472-493.—Usually one can state a satisfactory parallelism between the performance and the organization, that is, the unified complexity, of an animal. In the case of the protozoa, especially the amoeba, this is not so. On the one hand the structure of the amoeba is incomparably simpler than that of other animals, but, on the other, its behavior does not differ essentially from that of much more complicated animals. This paradox is discussed in terms of the work of Jennings, Bergson, Köhler, etc.—*R. E. Perl* (New York City).

49. Schilpp, P. A. [Ed.] The philosophy of John Dewey. Evanston, Ill.: Northwestern Univ., 1939. Pp. 723. \$4.00.—Descriptive and critical essays on John Dewey's philosophy by 17 eminent writers, followed by "The philosopher replies," by John Dewey, and a bibliography of his writings. A biographical sketch, written by his daughter, is also included. The volume is intended as a tribute to the philosopher upon his eightieth birthday.—(Courtesy *Publishers' Weekly*).

50. Searle, L. V. Application of the cluster analysis technique to profile correlations of rats with brain lesions. *Psychol. Bull.*, 1939, 36, 645.—Abstract.

51. Seashore, R. H., & Burack, B. An outline for the synthesis of viewpoints in psychology. *Psychol. Bull.*, 1939, 36, 624.—Abstract.

52. Smith, M. Obituary. William McDougall. *Brit. J. med. Psychol.*, 1939, 18, 105-111.—Biography, with personal recollections of McDougall's period at Oxford.—*E. R. Hilgard* (Stanford).

53. Spiegelberg, F. Philosophical problems in the interpretation of Indian and Chinese doctrines. *Psychol. Bull.*, 1939, 36, 614-615.—Abstract.

54. Stoltenberg, H. L. Zur Entwicklung der Erkenntnislehre. (The development of the theory of knowledge.) *Forsch. Fortschr. dtsch. Wiss.*, 1939, 15, 65-67.—Stoltenberg discusses a new order of the sciences and the position of biology and psychology therein.—*P. L. Krieger* (Leipzig).

55. Ten Hoor, M. The place of philosophy in the changing curriculum. *Psychol. Bull.*, 1939, 36, 610-611.—Abstract.

56. Tryon, R. C. Comparative cluster analysis. *Psychol. Bull.*, 1939, 36, 645-646.—Abstract.

57. Tschirch, A. Die Seele der Pflanze. (The soul of plants.) *Forsch. Fortschr. dtsch. Wiss.*, 1938, 14, 241-243.—We recognize from the activity of plants that they have souls.—*P. L. Krieger* (Leipzig).

58. Weber, H. *Der Umweltbegriff der Biologie und seine Anwendung.* (The biological concept of environment and its application.) *Biologie*, 1939, 8, 245-260.—Weber discusses the totality of the environment and surroundings, individual and super-individual qualities, and specific organization. Surroundings, as distinct from environment, do not belong to the concept of the organism. According to v. Uexküll, environment is always related to only one definite subject. It represents the totality contained in the whole complex of surroundings, which allows a given organism, by virtue of its specific organization, to maintain itself in the environment.—P. L. Krieger (Leipzig).

59. Weedon, W. S. *Psychology as a natural science.* *Psychol. Bull.*, 1939, 36, 612.—Abstract.

60. Wherry, R. J. *An approximation method for obtaining a maximized multiple criterion.* *Psychol. Bull.*, 1939, 36, 609.—Abstract.

61. Woodworth, R. S. *Psychological issues.* New York: Columbia Univ. Press, 1939. Pp. x+421. \$3.50.—This volume is a reprint of 25 papers selected by Woodworth's colleagues at Columbia University and published in honor of his seventieth birthday. The first paper of the volume is an autobiography. Then follow 10 papers on systematic problems, including imageless thought, voluntary movement, and Gestalt. The section on abnormal psychology includes 4 papers, one of which is entitled "Some criticisms of the Freudian psychology." On differential psychology, 4 papers are reprinted; on motor phenomena, 2 papers; and on educational psychology, 4 papers, including one with Thorndike on transfer of training. The volume contains a reproduction of the portrait by Blenner and a bibliography of Woodworth's writings from 1897 to 1938.—W. S. Hunter (Brown).

[See also abstracts 247, 500.]

NERVOUS SYSTEM

62. Bartley, S. H. *The effect of insulin on the nervous system.* *Psychol. Bull.*, 1939, 36, 632.—Abstract.

63. Bernhard, C., & Skoglund, C. R. *Recherches sur la fréquence alpha de l'électro-encéphalogramme chez l'enfant.* (Researches on the alpha frequency of the electro-encephalogram in the child.) *Acta psychiat., Kbh.*, 1939, 14, 223-231.—This article reviews results of studies by Marinesco, Berger, Rohrer, Lindsley, and Smith on the alpha frequency of the electro-encephalogram in animal and human subjects. In an experiment by the authors on 130 subjects ranging in age from 3 months to 45 years, they found that (1) the alpha frequency increases with age according to a logarithmic curve from 5.3 per second at 4 months to between 9 and 10 in the adult; (2) the variations around the mean for every age group are moderate; (3) day-to-day variations in the same individual are sufficiently small to justify the determination of alpha frequency on the basis of a single trial; (4) out

of 12 feeble-minded subjects 8 were found who had frequencies less than the smallest alpha frequencies in normal subjects of the same age. Sample encephalograms are presented. Bibliography.—F. Witmer (Mooseheart Laboratory for Child Research).

64. Bronk, D. W. *Synaptic mechanisms in sympathetic ganglia.* *J. Neurophysiol.*, 1939, 2, 380-401.—There are at least three aspects of the problem of synaptic transmission: the nature of events in the presynaptic neuron, the modification of the environment of the synapse by chemical agents or by alteration of the properties of the adjacent nervous tissue, and the nature of the changes in the secondary neuron. By recording action potentials from postganglionic pathways of sympathetic ganglia and in some instances from single postganglionic fibers the importance of each of the above factors has been demonstrated. First, the frequency, duration and pattern of stimulation in presynaptic neurons has been shown to affect synaptic transmission in the ganglion. Although spatial and temporal summation occur in the ganglion, an increase in the frequency of preganglionic stimulation above 20 per second causes temporal dispersion of postganglionic impulses with consequent reduction of response. Introduction of acetylcholine or potassium in the perfusing fluid so changes the environment of the synapse as to increase the excitability of postganglionic cells and to increase response. Calcium, on the other hand, reduces excitability, as does also the reduction of oxygen supply. The transmission of impulses across the synapses is completely blocked by asphyxia for one hour, but response partly returns after complete block for six hours. Finally, the activity of the postganglionic neuron is regulated by its own prior activity, inasmuch as each message is followed by after-potentials which condition excitability.—D. B. Lindsley (Brown).

65. Crouch, R. L., & Thompson, J. K. *Autonomic functions of the cerebral cortex.* *J. nerv. ment. Dis.*, 1939, 89, 328-334.—The cortex was exposed in cats, dogs, and monkeys under various anesthetics, and stimulated by electrodes carrying stimuli of different strengths. Sympathetic reactions measured were pupillary responses, heart rate, and blood pressure. The reactions found from stimulating different cortical areas are described. In cats reactions were predominantly sympathetic, with occasional parasympathetic reactions. In dogs predominant reactions were sympathetic, and in monkeys reactions were almost entirely sympathetic. The cortex is believed to affect the autonomic system as a whole. Autonomic control seems located fairly definitely at the junction of the motor and premotor cortical areas, probably more in the latter. Autonomic reactions from stimulation of sensory areas are probably dependent on sensory impulses to the hypothalamus. The character of the reaction, sympathetic or parasympathetic, is concluded to be dependent on the general physiological state of the animal and of the cortex at the time of stimulation.—R. C. Moore (Boston Psychopathic Hospital).

66. Dalsgaard-Nielsen, T. Om electroencephalografien og dens anvendelse i neurologien. (Electroencephalography and its employment in neurology.) *Ugeskr. Laeg.*, 1939, 101, 947-960.—The author gives an account, based on comprehensive studies of the literature, of the electro-encephalographic apparatus and techniques employed by various investigators and of their results. These are in turn compared with the ones obtained by the author himself. A particularly thorough description is given of the Berger or alpha rhythms. The evidence presented leads to the hypothesis that the potentials probably originate from the cortex as the resting potential of the cells associated with psychic function, while the frequency is the expression of a synchronicity that is regulated from a deeper (diencephalic?) center. Beta and delta waves are treated briefly. There are discussions and illustrations of electro-encephalograms of both normals and patients suffering from various forms of brain pathology.—N. J. Van Steenberg (Iowa).
67. Delay, J. L'asymbolie tactile. (Tactile asymbolia.) *J. Psychol. norm. path.*, 1938, 35, 446-457.—This is a report on a patient who, after being wounded by a bullet in the right parietal region, was left with an inability to recognize an object by touch with his left hand but could still do so at once with his right hand. For example, when a pencil was put in his left hand, he would say, "It is hard, it is long, it is cylindrical at one end and flat at the other, it has a point." When it was placed in his right hand he recognized it as a pencil in 2 seconds. The difficulty seems to be not one of synthesis but of immediate recognition. The tactile perception of the symbolic character of an object is at fault, and this ability seems to be specific and localized bilaterally in the brain.—R. E. Perl (New York City).
68. Ericksen, S. C. A second study of the relative effect of a cerebral lesion on learning, transfer, and retention. *Psychol. Bull.*, 1939, 36, 634.—Abstract.
69. Erlanger, J. The initiation of impulses in axons. *J. Neurophysiol.*, 1939, 2, 370-379.—Although it is generally believed that certain properties of central conduction such as latency or delay, one-way transmission, repetition, temporal summation or facilitation, and transmission across a non-conducting gap are peculiar to the synapse, evidence is adduced to show that these characteristics may be demonstrated also in the nerve fiber. The evidence is based upon the behavior of action potentials in nerve fibers under the influence of polarizing currents. The experiment demonstrating transmission across a non-conducting gap, namely one or two internodal segments of the nerve blocked by polarization, also throws light on the problem of electrical versus chemical transmission at neuromuscular or synaptic junctions.—D. B. Lindsley (Brown).
70. Finley, C. B. The effect of temperature upon typical potential changes, or C. E. S. in the spinal cord of the frog. *Psychol. Bull.*, 1939, 36, 606-607.—Abstract.
71. Gasser, H. S. Axons as samples of nervous tissue. *J. Neurophysiol.*, 1939, 2, 361-369.—In the absence of direct evidence concerning the functional properties of the synapse, the characteristics common to various types of axons are taken as representative of those in the parts of the neuron entering into the synapse. In all fibers, types A, B and C, action starts with a spike potential and is followed by a sequence of negative and positive action potentials which are related to excitability. The spike potentials are regarded as message carriers; the after-potentials are related to the level of excitability. This is true also in the dendritic ends of motor and sensory neurons. Subnormal excitability following single impulses or trains of impulses is associated with the positive after-potential in all kinds of axons and in all parts of the neuron, even in the c. n. s., where it is called inhibition. All that can be learned of subnormality in the axon is therefore of value in the interpretation of central inhibition as well as of synaptic function.—D. B. Lindsley (Brown).
72. Hadley, J. M. Some relationships between electrical signs of cortical and peripheral activity. *Psychol. Bull.*, 1939, 36, 631.—Abstract.
73. Hebb, D. O. Intelligence in man after large removals of cerebral tissue: defects following right temporal lobectomy. *J. gen. Psychol.*, 1939, 21, 437-446.—"A case is reported in which an extensive removal from the right temporal lobe was followed by a disturbance of non-language capacities, with an apparently good retention of language capacities." The defect, psychometrically, appeared due to visual and non-visual form perception difficulty. Some disturbance of social comprehension appeared probable. Epileptoid origin of the defects seems unlikely, "and they appear at any rate to be related to the locus of the lesion." It is indicated by the results that a good Binet score after cerebral injury is not indicative of a similar level in other test abilities. Normal intelligence may be regarded "as a complex whose components may be differently affected by cerebral lesions."—C. N. Cofer (Brown).
74. Henry, C. E. The relationship between brain potentials and personality. *Psychol. Bull.*, 1939, 36, 631-632.—Abstract.
75. Holst, E. v. Vom ordnenden Prinzip im zentralen Nervensystem. (The organizing principle in the central nervous system.) *Forsch. Fortschr. dtsh. Wiss.*, 1938, 14, 68-70.—P. L. Krieger (Leipzig).
76. Jacobsen, C. F. The effects of extirpations on higher brain processes. *Physiol. Rev.*, 1939, 19, 303-322.—A review of the recent literature on behavioral adjustments in rats and monkeys after cortical injuries leads to the following general conclusions: In the mediation of learned behavior, the subcortical centers must be considered equally with the cortical. Behavior mediated at subcortical levels is not necessarily primitive, but may exhibit the same characteristics as cortically organized activity. With the possible exception of man, the

Pavlovian view which attributes modifiability exclusively to the cortex is no longer justifiable. The neural structures concerned in these subcortical activities and the manner of organization of cortical and subcortical centers is largely unknown. The sensory and motor regions in higher mammals participate in a more general integration which is dissociated from their functions as sensory regions per se. Within limits, all parts of the cortex appear capable of mediating this integration. In primates, however, some of the more complicated behavioral adjustments depend on the intactness of restricted areas, especially the parieto-temporal and frontal regions, injury to which results in disturbances not found with damage to the sensory or motor projection fields. Bibliography.—*M. E. Morse* (Baltimore).

77. **Katz, B.** Experimental evidence for a non-conducted response of nerve to subthreshold stimulation. *Proc. roy. Soc.*, 1937, B124, 244-275.—This paper reports experimental evidence for the hypothesis that subthreshold stimulation of a nerve may, by exciting only a small subliminal length of it, produce a transitory local response, the spread and size of which do not suffice to excite resting points farther on. The relative size and time relations of this passing local response (traced by means of excitability measurements with short double shocks) are described. Various other ascertained characteristics of the response are also described. 37 references.—*C. K. Trueblood* (Harvard).

78. **Katz, B., & Schmitt, O. H.** Excitability changes in a nerve fibre during the passage of an impulse in an adjacent fibre. *J. Physiol.*, 1939, 96, 9P-10P.—In the limb nerve of the shore crab, the excitability of the second fibre shows 3 phases. With the approach of the action potential in the first fibre, the second becomes first less, then more excitable, and finally again slightly less excitable.—*M. E. Morse* (Baltimore).

79. **Koppanyi, T., & Linegar, C. R.** Evidence for the existence of a respiratory neurohormone. *Science*, 1939, 90, 141-142.—It has been observed that amounts of acetylcholine which produce pressor effects and contraction of the nictitating membrane also increase the rate and depth of respiration for brief intervals. The larger the dose of acetylcholine the longer the duration of respiratory stimulation and the greater the depth of respiration. It is concluded that the respiratory effect depends upon the presence of the carotid body and that the active principle is not acetylcholine but a sympathin liberated at the nerve terminations following stimulation of sympathetic ganglia by acetylcholine.—*F. A. Mote, Jr.* (Brown).

80. **Lemere, F.** Electroencephalography. *Psychiat. Quart.*, 1939, 13, 5-15.—Electroencephalographic records from 100 normal subjects and 150 neuropsychiatric patients. In general the findings were differentially diagnostic only for epilepsy, and are significant in organic neuropsychiatric conditions only when the damage is so severe as to be clinically

obvious. Paucity of alpha waves seems a characteristic of schizophrenia, and the author postulates that the physiopathology of schizophrenia is a constitutional defect of diencephalic energy production, especially as related to transmission of tonus impulses to the cortex. The physiopathology of the manic-depressive psychoses would be a hyperactive diencephalon sending excessive tonus impulses to the cortex, with a resulting hypertonic cortex. Limitations of the method are pointed out.—*R. C. Moore* (Boston Psychopathic Hospital).

81. **Marrazzi, A. S.** A self-limiting mechanism in sympathetic homeostatic adjustment. *Science*, 1939, 90, 251-252.—The efforts of the organism to maintain maximum efficiency when faced by environmental change call forth sympathetic discharge. There occurs a liberation of adrenaline, which increases sympathetic activity. If this becomes excessive the concentration of adrenaline in the blood produces ganglionic inhibition and thus decreases the sympathetic discharge by obstructing the passage of impulses from the pre- to the post-ganglionic neurones. This block is thought to lower the output of adrenaline, which results in the removal of inhibition. If the need for homeostasis persists, sympathetic activity is again initiated and continues until restrained by the self-limiting influence of the increasing blood adrenaline.—*F. A. Mote, Jr.* (Brown).

82. **Monrad-Krohn, G. H.** On facial dissociation. *Acta psychiat. Kbh.*, 1939, 14, 557-566.—The author has several previous studies to show that the facial voluntary and emotional innervations are two different things and that these two may be differently exhibited in central facial paresis. The present article gives an account of two cases described in *Brain*, 1924, and now re-examined in 1938. General comments and suggestions are offered.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

83. **Papez, J. W.** Cerebral mechanisms. *J. nerv. ment. Dis.*, 1939, 89, 145-159.—The relationships of the higher and lower centers of the central nervous system are discussed, especially in reference to the sensory areas of the cortex, the prefrontal cortex, and the medial cingular cortex, with their three counterparts in the thalamus. Connections are traced and functions described, with the emphasis on integrative relationships. The author concludes that on the basis of morphological, experimental, and clinical data, three main streams of physiological potentials reach the cortex: (1) diverse and specific sensory excitations which underlie the general stream of perceiving; (2) excitations of a more global nature passing to the corpus striatum and frontal lobe, underlying the focalizing and orientative processes; (3) a stream of excitations passing through the pars ventralis thalami to the hypothalamus and the gyrus cinguli, underlying general consciousness and the emotive reactions. The three streams are probably united in the cortex into a common process of varying composition.

The cortex is not an independent level of activity, but has recurrent relations to all the lower levels of the central nervous system.—*R. C. Moore* (Boston Psychopathic Hospital).

84. **Quastel, J. H.** *Respiration in the central nervous system.* *Physiol. Rev.*, 1939, 19, 135-183.—A comprehensive review of the subject, in relation to cerebral activity. Bibliography.—*M. E. Morse* (Baltimore).

85. **Waters, R. H.** *Morgan's canon and the problem of the nervous system.* *Psychol. Bull.*, 1939, 36, 623.—Abstract.

[See also abstracts 50, 204, 258, 287.]

RECEPTIVE AND PERCEPTUAL PROCESSES

86. **Allard, H. A.** *Vocal mimicry of the starling and the mockingbird.* *Science*, 1939, 90, 370-371.—Three features of the starling's mimicry are noted: the unusual variety of sounds mimicked, the out-of-season production of notes of summer birds, and the persistence of a given note which becomes a "hit" for a considerable period of time and then drops out of the repertory of the birds. The mockingbird is said to be a more original artist than the starling.—*F. A. Mote, Jr.* (Brown).

87. **Arnold, D. C., & Tinker, M. A.** *The fixational pause of the eyes.* *J. exp. Psychol.*, 1939, 25, 271-280.—The briefest possible pauses made in fixating a dot, a letter, and a blank area were measured by the photographic method. On the average it took 172 ms. to fixate the dot, 157 ms. for the letter, and 199 ms. to stop without an object to fixate. Readjustments during fixation were frequent in all situations. Since the duration of the readjusted pauses was similar to that of the unadjusted pauses it is suggested that the two parts of the readjusted pauses supplement each other to form a coordinated unitary reaction. The briefest mean pause is longer in duration than the exposure needed for a well cleared up perception. Fixational pauses in reading have mean durations that are much longer than occur during briefest possible fixations as measured in this experiment. These longer durations in reading may be explained in terms of the requirements for comprehension and assimilation of the materials read.—*H. W. Karn* (Pittsburgh).

88. **Atwell, S.** *Color vision in relation to artistic ability.* *Psychol. Bull.*, 1939, 36, 647.—Abstract.

89. **Baldwin, A. L.** *The visual perception of filled and unfilled space by the after-image method.* *Amer. J. Psychol.*, 1939, 52, 376-379.—Evidence has suggested that the stability of the visual field is reduced in the after-image. The present study uses this technique for testing some of the implications of the theories of perception presented by Brown, Voth, and Orbison. The 2 naïve S's were asked to observe a horizontal light stimulus for a suitable length of time; a screen was then lowered in front of the stimulus and the after-image projected on it. 5 experiments, each consisting of 50 observations,

were made; in each case a pointer was adjusted to show the location of the ends of the after-image. The stimuli in the 5 experiments were: (1) a single light point, 8 cm. to the right (left) of the fixation point; (2) the right and left lights presented simultaneously; (3) 5 evenly spaced lights, over the 16 cm. distance; (4) a line 16 cm. long; (5) experiments 3 and 4 repeated without the artificial pupil. The results corroborated Spiegel's in exhibiting first a shrinking and then an expansion as the space is filled, the distortion in some cases amounting to as much as 200%.—*D. E. Johannsen* (Skidmore).

90. **Balinkin, I. A.** *Industrial color tolerances.* *Amer. J. Psychol.*, 1939, 52, 428-448.—The present paper deals with the problem of evaluations of color differences of ceramic glazed wall tiles. The necessity for measuring color tolerance under standard conditions is discussed and the conditions under which the observations were made in the present study are described. Comparison of colors by the ratio method proved that S's could quite satisfactorily judge the distance between pairs of colors in numerical terms when the difference between a standard pair was set arbitrarily at 1. Following this the color differences were evaluated by three different physical measurements. The agreement between the visual estimations of the differences and those computed from physical measurements is not entirely satisfactory. However, a fairly satisfactory method of determining the optimal and the maximal amount of color variability that consumers will tolerate is presented. Finally a method of producing uniform color in commercial products is described.—*D. E. Johannsen* (Skidmore).

91. **Békésy, G. v.** *Über die mechanisch-akustischen Vorgänge beim Hören. I.* (The mechanical-acoustical processes in hearing. I.) *Acta oto-laryng., Stockh.*, 1939, 27, 281-296.—This is the first part of a study. "By means of amplifiers, conditions can now be set up which permit the measurement of very faint sound frequencies and very small oscillations. . . . The measurement of the oscillation capacity of the tympanic membrane (notably with the aid of small inserted mirrors) and of its so-called acoustic impedance can now be carried out quite accurately, and yields curves very characteristic for different people, so that it is to be assumed that it will be possible to show characteristic and measurable changes in the oscillative capacity of the middle ear in connection with pathologic middle-ear changes also. . . . However, the strange distribution of the mass of the auditory ossicles could still not be understood at all. E. Bárány shed new light upon this question by showing that the masses of the auditory ossicles must necessarily be distributed in such a way that the bone-conduction tone produced by one's own voice is reduced to a minimum. Thus the middle ear seems to become an interesting field for the technical study of oscillation."—*E. M. Pilpel* (New York City).

92. **Békésy, G. v.** *Über die mechanisch-akustischen Vorgänge beim Hören. II.* (The mechanical-

acoustical processes in hearing. II.) *Acta otolaryng., Stockh.*, 1939, 27, 388-396.—A survey of trends in the development of modern acoustics is followed by a discussion of the mechanical characteristics of the middle ear. Since an oscillatory system can be characterized by its independent oscillations, the pull oscillations (*Zupfschwingungen*) of the middle ear were recorded by an oscillograph on the cadaver and the living subject. Some of the phenomena investigated in this way were the non-linearity of the tympanic oscillations, the influence of perforation of the tympanic membrane upon the hearing threshold, and the origination of the sensation of pain in the middle ear with excessively high sound-pressure amplitudes. Furthermore, it was shown that the middle ear, like the iris, represents a protective arrangement for the inner organs. In connection with the inner ear it is shown that, with loud tones, there appear not only oscillations of fluid arising in the cochlea, but also currents of fluid, which may often become so strong that they influence the organs of equilibrium in the vicinity. In conclusion, attention is called to the origin of the sensation of remoteness in hearing.—*E. M. Pilpel* (New York City).

93. Békésy, G. v. *Über die Vibrationsempfindung.* (The sensation of vibration.) *Akust. Z.*, 1939, 4, 316-334.—The spread of mechanical oscillations and the isolation of sound in the human body were studied. It was demonstrated that the sensations of pressure and vibration arise from two different kinds of nerves, which can be separated near the hair roots. The vibration threshold was thoroughly measured and it was shown through measurements of the skin surface that the sensation of vibration is determined not by changes of pressure but by the extent of the deformation. Finally, an order for the subjective measurement of the strength of vibration is given.—*P. L. Krieger* (Leipzig).

94. Berman, A. *The relation of time estimation to satiation.* *J. exp. Psychol.*, 1939, 25, 281-293.—A stylus punch-board maze was the medium for the induction of satiation. Satiation was operationally defined: an individual was satiated when he rejected an activity which was initially pursued, and reported or exhibited characteristic attitudes of satiation. Under the conditions represented 87% of the satiated subjects of two experiments underestimated the time required for them to become satiated. 52% of a non-satiated group of subjects overestimated the time required for them to achieve the criterion of learning. The greater underestimation than overestimation of time by satiated subjects does not appear to be fully explained by the theory that underestimation is characteristic of those who can divorce themselves from the satiating activity; those who cannot leave the behavioral field, on the other hand, overestimate time. A theory of satiation based upon the belief in total consistent trends in time estimation, and in the operation of a single causative factor in judgments of time, does not seem to be warranted.—*H. W. Karn* (Pittsburgh).

95. Best, H. *Blindness: definition and statistics.* *Amer. sociol. Rev.*, 1939, 4, 488-492.—This article discusses the difficulty of formulating a generally useful definition of blindness, and of obtaining uniformly significant statistics on the incidence of blindness.—*I. L. Child* (Harvard).

96. Boring, E. G. *The psychophysics of color tolerance.* *Amer. J. Psychol.*, 1939, 52, 384-394.—The three psychophysical scales (the difference limen, the standard deviation of the limen, and the sense-distance) by which color tolerance may be determined are described. Curves showing various color relations are given.—*D. E. Johannsen* (Skidmore).

97. Bourdon, B. *Expériences sur la vision, les yeux fermés.* (Experiments on vision with eyes closed.) *J. Psychol. norm. path.*, 1938, 35, 424-446.—This is a study of the gleam perceived with closed eyes when there is a momentary illumination following a period of complete darkness. The author discusses the lack of uniformity of the gleam, twinkling, color perception, the dimensions of the field of vision, depth, localization, movement, and images.—*R. E. Perl* (New York City).

98. Brand, A. R., & Kellogg, P. P. *The range of hearing of canaries.* *Science*, 1939, 90, 354.—As a result of experiments using a conditioning technique the range of hearing of the canary has been determined as 1100-10,000 c. p. s.—*F. A. Mote, Jr.* (Brown).

99. Brandt, H. F. *Ocular photography: a study of ocular patterns to discover characteristic eye-movements and their psychological implications.* *Psychol. Bull.*, 1939, 36, 634.—Abstract.

100. Broers, H., & Kleyn, A. de. *Experimentelle Untersuchungen über den optokinetischen Nystagmus.* (Experimental studies on optokinetic nystagmus.) *Acta otolaryng., Stockh.*, 1939, 27, 329-337.—On the basis of their studies the authors find it possible to conclude definitely that "it is possible to induce experimentally in dogs three different forms of hemianopsia: Two forms of hemianopsia appear either after section of an optic tract or after the creation of superficial lesions in the visual cortex, after which an optokinetic 'focus nystagmus' (*Schaunystagmus*) remains elicitable on one side. A third form of hemianopsia appears in our experiments after total extirpation of an occipital lobe or a whole cerebral hemisphere; in connection with optokinetic 'focus nystagmus,' it is elicitable in one direction only. These results coincide well with our clinical experiences. In the clinic, too, various investigators have shown that, with certain forms of hemianopsia, the optokinetic nystagmus is elicitable in both directions, . . . while there are other forms of central hemianopsia in which optokinetic nystagmus can be elicited only toward one side."—*E. M. Pilpel* (New York City).

101. Brown, R. H., & Page, H. E. *Pupil dilatation and dark adaptation.* *J. exp. Psychol.*, 1939, 25, 347-360.—Evidence is presented which shows that increase in pupil area (determined by photog-

raphy under infra-red radiation) is proportional to the increase in cone sensitivity during dark adaptation following light adaptation to 1200 ml.—*H. W. Karn* (Pittsburgh).

102. **Carmichael, L., & Smith, M. F.** Quantified pressure stimulation and the specificity and generality of response in fetal life. *J. genet. Psychol.*, 1939, 54, 425-434.—As punctiform pressure stimuli, 17 hair esthesiometers ranging in tension from .14 to 7.75 units were used with 45 guinea pig fetuses 35-62 days of age. For each fetus a "light" stimulus, eliciting a just noticeable response, and a "heavy stimulus" (7-9 points higher in the scale) were selected and applied alternately to each of 10 predetermined areas. Responses were quantified by counting behavior items appearing in motion pictures and dictated protocols. At all ages the heavy stimulus released nearly 2/3 of the total responses and excited larger, more general activity patterns. Thus specific reflexes appeared early in fetal life and the intensity of the stimulus was important in determining the specificity of response.—*D. K. Spelt* (Mississippi).

103. **Chavasse, F. B.** Worth's squint; or the binocular reflexes and the treatment of strabismus. (7th ed.) Philadelphia: Blakiston, 1939. Pp. 688.—Changes in the binocular reflexes which occur in strabismus are explained on the basis of blocking of normal development, which results in secondary reflexes that may become firmly established and complicate treatment, especially by orthoptic methods. Early and accurate diagnosis, with prompt application of occlusion to discourage amblyopia and secondary correspondence, is emphasized; operative procedures are discussed in detail.—*D. J. Shaad* (Institute of Ophthalmology, New York City).

104. **Craik, K. J. W., Rawdon-Smith, A. F., & Sturdy, R. S.** The transient response of a primitive ear. *J. Physiol.*, 1939, 96, 18P-19P.—The response of the ear of the land tortoise to electrically generated transients was studied. This animal was chosen because the response consists almost entirely of action potentials, phenomena analogous to the mammalian "cochlear effect" being very small. The essential phase of the stimulus consists in the development of positive pressure at the ear drum. This is in contrast to the cat, in which the stimulating phase is the negative pressure wave. Therefore the crude auditory apparatus of the tortoise probably does not represent the evolutionary prototype of the mammalian cochlea.—*M. E. Morse* (Baltimore).

105. **Dallenbach, K. M.** Pain: history and present status. *Amer. J. Psychol.*, 1939, 52, 331-347.—The author summarizes the history of the work on pain from the time of Aristotle to the present. He analyzes the fundamental problem of whether or not pain is a sensory experience, and its relationship to pleasure. After scientific opinion agreed fairly well on its sensory nature there still remained 5 outstanding problems: (1) the identification of its receptors; (2) the determination of the peripheral pathways; (3) localization of the cerebral centers;

(4) explanation of its inability to adapt; and (5) the explanation of its relationship to unpleasantness. An analysis of the experimental studies on these problems indicates the solution of (4) by the determination of the fact that with a constant stimulus adaptation does occur. Problem (2) appears near solution. Some work has been done on (1), but (3) and (5) seem no nearer solution than at the beginning of the century.—*D. E. Johannsen* (Skidmore).

106. **Dimmick, F. L., & Hubbard, M. R.** The spectral components of psychologically unique red. *Amer. J. Psychol.*, 1939, 52, 348-353.—This study reports the determination of the amount of the psychologically unique blue (476 m μ) that must be added to spectral red (635 m μ) to produce a psychologically unique red, i.e., one that is neither bluish nor yellowish. The 5 S's were asked to judge whether the presented colors were yellowish (bluish) or not-yellowish (not-bluish); they were not asked for a judgment on the purity of the red. The values used were determined by the method of limits; the final limens were determined by the method of constant stimuli and 100 judgments were made on each of 7 stimuli. The median value of the unique red for all S's was a red that is complementary to a wave length of 493.6 m μ . An ICI diagram is given showing the location of the four psychologically unique hues.—*D. E. Johannsen* (Skidmore).

107. **Ehrenstein, W.** Bewegungssehen ohne Dunkelpause. (Seeing movement without a dark interval.) *Forsch. Fortschr. dtsch. Wiss.*, 1939, 15, 264-266.—Movement is seen only when a constellation of stimuli is realized in which the chronologically earlier stimulated optical sector has undergone an abrupt decrease in intensity of at least 25%, and the repercussion of this process in the psychophysical realm is declining but not totally extinguished; while the chronologically later stimulated optic center must have experienced an abrupt increase in intensity of at least 25%, the after-effect of which is fading out but not entirely effaced.—*P. L. Krieger* (Leipzig).

108. **Feinbloom, I.** The effect of the wearing of glasses on myopia. *Amer. J. Optom.*, 1939, 16, 282-300.—There are many different opinions concerning the etiology of myopia, with a preponderating acceptance of the view that accommodative convergence fatigue due to excessive close work is a significant factor. Various opinions are cited concerning the effect on the progress of myopia of wearing corrections, but little experimental evidence has been reported to support any of these views. Replies to a questionnaire indicates that 75 to 80% of practitioners do not believe that mere wearing of the correction will affect the progress of the myopic changes, and that about 45% advocate additional treatments for the efficacy of which there appears to be similarly little experimental evidence.—*M. R. Stoll* (Ohio State).

109. **Flory, R. M.** A study of the factors determining discrimination of size by the white rat. *Psychol. Bull.*, 1939, 36, 607.—Abstract.

110. Fraise, P. *Recherches sur les lois de la perception des formes.* (Research on the laws of form perception.) *J. Psychol. norm. path.*, 1938, 35, 415-424.—The author experiments with form perception in different sense modalities in an attempt to find some of the laws governing the influence of the internal structure of a form on the perception of its parts.—R. E. Perl (New York City).

111. Fry, G. A. *Further experiments on the accommodation-convergence relationship.* *Amer. J. Optom.*, 1939, 16, 325-336.—The apparatus here used provides for separate controls of accommodation and convergence. After a preliminary adjustment, an arm of the reflecting phorometer was mechanically moved at a speed producing a change in convergence of 0.25° per sec., while the observer adjusted the position of two vertical slits to maintain their alignment and so produced a record of change in accommodation with the change in convergence, while an effort was made to maintain clear vision of a constant target. Increases and decreases in convergence were effected for different levels of accommodation brought about by placement before the eyes of a series of lenses ranging from +3.00 to -2.00. The resultant ogive curves indicate the range of positive and negative relative convergence associated with each accommodation level. Vertical distances between the curves indicate the relative accommodation for various degrees of convergence. Lines tangent to the extremities of the curves are parallel, and their slope can be taken as a measure of the ratio of accommodation to accommodative convergence. The disappearance of negative relative accommodation at the point of maximum divergence, reached when accommodation is reduced to zero, supports Sheard's analysis of this zone of play where it differs from the analysis of Cross.—M. R. Stoll (Ohio State).

112. Fryer, D. *Post quantification of introspective data.* *Amer. J. Psychol.*, 1939, 52, 367-371.—The present experiment was an attempt to analyze the ability of an individual to report on his motivation after finishing a task. 4 trained S's worked for 1-min. intervals on a speed addition test; 1 S worked for 4-min. intervals. After completing each test, S reported as completely as possible every awareness he had of drive or motive during the work. E then rated these reports on two scales: (1) general estimate of conscious motivation, and (2) specific factors found, e.g., motor pressure, verbal cues, etc. The validity of this method proved to be only fair, the average r between the tests on (1) being about .30, but it is suggested that the method may be of value in certain technical occupations.—D. E. Johannsen (Skidmore).

113. Gilmer, B. v. H. *Vibration spots and their underlying tissue—a preliminary report.* *Psychol. Bull.*, 1939, 36, 605-606.—Abstract.

114. Goodfellow, L. D. *Sensory discrimination for alternating current stimuli.* *Psychol. Bull.*, 1939, 36, 632.—Abstract.

115. Granit, R., Munsterhjelm, A., & Zewi, M. *The relation between concentration of visual purple*

and retinal sensitivity to light during dark adaptation. *J. Physiol.*, 1939, 96, 31-44.—Experiments with the excised eyes of frogs and the decerebrate cat lead the authors to a revision of the current ideas on this subject. Their results show that the rise in sensitivity lags behind the increase in concentration of visual purple, the fast rise of sensitivity setting in when the concentration has reached 50-60% of the maximum value for the completely dark-adapted eye. The conclusion is that rise in sensitivity, as measured electrically, is not a simple function of the curve of visual purple regeneration in terms of density values. The authors believe that the return of sensitivity is due to a secondary or intermediate process which in order to start requires a minimal concentration of 50% of the maximal value for visual purple. They suggest that this process consists in building up an excitable locus in the rod cell with the aid of visual purple molecules.—M. E. Morse (Baltimore).

116. Harton, J. J. *The influence of the degree of unity of organization on the estimation of time.* *J. gen. Psychol.*, 1939, 21, 25-49.—Estimation of durations under "different degrees of unity of organization in the activities of individuals" was studied. Learning of one long mental maze presented an organized task as compared with learning of several short mazes in the same objective time. 52 of 58 subjects estimated the time of learning the long maze as less than that for learning the short mazes. Three other situations were then used: (1) answering questions on one topic (organized); (2) waiting; (3) conversation. Estimates of the durations of these activities were made. The results showed unreliable differences, but they were "in the same general direction as those of several other experiments." Peg-puzzle experiments also suggested this trend. Further experiments contrasting solution of a puzzle with making designs showed one group to estimate the solution period as of less duration than the design period, while another group which displayed signs of emotional upset during puzzle solving manifested a statistically unreliable trend in the opposite direction.—C. N. Cofer (Brown).

117. Harton, J. J. *An investigation of the influence of success and failure on the estimation of time.* *J. gen. Psychol.*, 1939, 21, 51-62.—Subjects were allowed to have successes and failures on performances with mental mazes. The experimenter made encouraging and discouraging remarks simultaneously with these performances. 30 seconds after success and failure trials the subject was asked to estimate the time he had spent on the maze. Two groups of subjects were consistent in estimating successful periods as shorter than failure periods. Success induces "a greater degree of unity of organization in the individual's activity than the failure periods," a possible explanation of the results.—C. N. Cofer (Brown).

118. Harton, J. J. *The relation of time estimates to the actual time.* *J. gen. Psychol.*, 1939, 21, 219-224.—50 men made 196 estimates of durations of

90 seconds, and 90 women made 202 estimates of periods of 75 seconds. Men made more overestimates and on the average gave 48% greater overestimates than women. Two successive estimates correlated $.89 \pm .09$ for women and $.69 \pm .07$ for men for periods of 75 seconds. Correlations for 90-second periods for men (the 2 estimates being separated by a week) ran from .44 to .46. More women consistently underestimated than did men, and equal numbers of the sexes consistently overestimated. Experiments with other subjects and time durations supported the foregoing data. Estimates by one subject for long durations after various activities are presented.—C. N. Cofer (Brown).

119. **Hattingberg, I. v.** *Sensibilitätsuntersuchungen mit Schwellenverfahren.* (Studies of sensation with the threshold procedure.) *Forsch. Fortschr. dtsh. Wiss.*, 1939, 15, 252-253.—On the one hand, the more delicately a performance is differentiated (e.g. hand movements), the more it is to be considered as a function of definite specialized cell groups. Thus cortical centers are formed by progressive differentiation of definite performances. On the other hand, if the corresponding centers drop out, all processes important for life are re-educable through the great constructive capacity of the brain. Due to this cerebral power of transformation and adaptation, the unity of the picture of the sensory world is retained, although our receptive organs undergo continuous change.—P. L. Krieger (Leipzig).

120. **Helson, H.** *Color tolerances as affected by changes in composition and intensity of illumination and reflectance of background.* *Amer. J. Psychol.*, 1939, 52, 406-412.—Results are reported showing that individual differences in color vision, the composition of the illuminant, and the reflectance of the background determine the hue, lightness, and saturation of colored objects as much as does the spectral reflectance of the object itself.—D. E. Johanssen (Skidmore).

121. **Henry, F.** *The difference limen for tonal duration.* *Psychol. Bull.*, 1939, 36, 642.—Abstract.

122. **Holle, W.** *Frequenz- und Schallstärkemessungen an Hiebtönen.* (Measurements of the frequency and loudness of stroke sounds.) *Akust. Z.*, 1938, 3, 321-331.—Stroke sounds are those made by swinging a stick through the air or by the streaming of air past sticks or machinery running at high speed. They are practically free from overtones. The measurements of frequency are in harmony with the values in earlier publications. The loudness increases with thick rods to the sixth power of the speed of the rod, and with thinner rods to higher powers.—P. L. Krieger (Leipzig).

123. **Hollingworth, H. L., & Weischer, V.** *Persistent alphabetical synesthesia.* *Amer. J. Psychol.*, 1939, 52, 361-366.—A case of synesthesia that persisted almost unchanged over a period of 12 years is reported in some detail. The determining factor appeared to be an unconscious association of letter sounds with colors; the colors are associated

only with letters, words, and numbers.—D. E. Johanssen (Skidmore).

124. **Holm, E., & Lodberg, C. V.** [Genealogical study of color blindness.] *Acta ophthal., Kbh.*, 1939, 16, 524.—The authors present an analysis of 19 color-blind patients in a family of 300 individuals, among which is the case examined anatomically by Larsen (see *Ophthal. Year Book*, 1924, 20, 225). Consanguinity was found in 30% of the color-blind.—R. R. Willoughby (Brown).

125. **Holmgren, L.** *Hearing tests and hearing aids. A clinical and experimental study.* *Acta oto-laryng., Stockh.*, 1939, Suppl. 34. Pp. 164. "The aim of this work has been to analyze ordinary hearing tests against a background of some simple acoustic laws. Several chapters are devoted to an account of the prevailing methods for testing hearing and their value on comparison with each other under varying acoustic conditions. . . . Chapter IV includes a tabular account of a number of comparative tests carried out at Sabbatsberg Ear Clinic by means of whispering, conversation, tuning forks, and the audiometer. From these is revealed how speech and fork methods give exceedingly varying hearing values for the same hearing loss." In Chapter V the author "demonstrates an electrically driven tuning fork, by means of which more accurate results are obtainable." The advantages of a weak constant noise in the testing room are also pointed out. "Chapter IX includes a survey of the various methods of procedure in the testing of hearing apparatus and analyzes the contrast between hearing loss of the conduction and perceptive types. Furthermore, the imperfection of audiometers in present-day practice in the trying out of suitable hearing aids is discussed."—E. M. Pilpel (New York City).

126. **Howell, C. D.** *The responses to light in the earthworm *Pheretima agrestis* Goto and Hati, with special reference to the function of the nervous system.* *J. exp. Zool.*, 1939, 81, 231-259.—These worms are negative in all intensities of light to which they respond. They are more strongly negative in strong than in weak light. The anterior end is most sensitive to light. All operations on the nervous system at the anterior end decrease negativity to lateral illumination. Removal of the brain makes the worm positive in weak light but still negative in strong light. A schema to explain the observed behavior in terms of neural mechanisms is presented.—L. Carmichael (Tufts).

127. **Hutchinson, J.** *The diagnosis and treatment of orthoptic difficulties in relation to reading.* *Psychol. Bull.*, 1939, 36, 633.—Abstract.

128. **Huzisawa, H.** [The influence of low pressure upon audition.] *Okayama med. J.*, 1938, 50, 2118-2129.—It took 18 to 27 minutes to decrease the air pressure from the normal state to 445 mm Hg in a low pressure room. Four kinds of tuning forks, c, c', B'' and D''', were used in the room for audiometry by both air and bone transmission of sound. The effect of low pressure upon hearing were con-

sidered from two standpoints, the sensitivity of auditory nerves and the transmission apparatus for sound. Sensitivity was found to be increased in such an experimental condition and air transmission to be hindered by rapid change of pressure. It took 25 to 37 minutes for return to the normal state of pressure.—*R. Kuroda* (Keijo).

129. Igarashi, H. [On acid taste caused by decreased freshness of fish.] *Bull. chem. soc. Japan*, 1938, **59**, 1258.—Acidity in the sardine, mackerel, bonito, and tunny of decreased freshness is found to be due principally to the basic material histamine, a product of decomposed albumen involved in them. The poisoning evoked by eating these fish can therefore be classed as histamine poisoning.—*R. Kuroda* (Keijo).

130. Jenkins, W. L. Nafe's vascular theory and the preponderance of evidence. *Amer. J. Psychol.*, 1939, **52**, 462-465.—An answer to Nafe's response (*Amer. J. Psychol.*, 1938, **51**, 763-769) to Jenkins' original criticism (*Amer. J. Psychol.*, 1938, **51**, 424-429).—*D. E. Johanssen* (Skidmore).

131. Jenkins, W. L. Studies in thermal sensitivity: 11. Effects of stimulator size in seriatim cold-mapping. *J. exp. Psychol.*, 1939, **25**, 302-306.—"Seriatim cold-mapping with a range of five stimulator sizes, the smallest 1 mm diam., gives satisfactory reliability coefficients (.80 or over) with all sizes in the majority of untrained subjects. Average scores indicate roughly a linear summation effect at the lowest levels, but the curve flattens out rapidly with the larger sizes. Even with the 1 mm diam. stimulator, the maps tend to show grouping of similar scores into hills and valleys, and not a random arrangement of separate cold spots. By mapping the same area with two different sizes of stimulator, it should be possible to attack the problem of summation with supra-liminal stimuli."—*H. W. Karn* (Pittsburgh).

132. Jenkins, W. L. Studies in thermal sensitivity: 12. Part-whole relations in seriatim cold-mapping. *J. exp. Psychol.*, 1939, **25**, 373-388.—Seriatim cold-mapping of the same cutaneous region alternately with two stimulators, the smaller being one half or one third the area of the larger, shows that scores indicating intensity of experience are dually determined: (1) There is a minor effect of size, relatively unimportant except with small stimulators. (2) The major influence is the square-root function—whole scores being equal to the square root of the mean of the squares of differing part scores. Reliable seriatim maps with a 1 mm diam. stimulator reveal no isolated cold spots, i.e., positive squares surrounded by zero squares. The positive squares are always grouped in clusters. It is argued that mapping with smaller stimulators cannot resolve these clusters into ultimate units, because the maps are disintegrating with no sign of resolution. Neither the traditional "cold spot" theory nor the thermal-conduction modification provides a satisfactory explanation of the experimental facts. A new theory, in terms of the concentration of minute

receptors as the determiner of sensitivity, is proposed.—*H. W. Karn* (Pittsburgh).

133. Johnson, M. L. The effect of vitamin A deficiency upon the retina of the rat. *J. exp. Zool.*, 1939, **81**, 67-89.—Retinae from animals exhibiting signs of severe vitamin A deficiency show marked degeneration, which apparently is progressive.—*L. Carmichael* (Tufts).

134. Judd, D. B. Specification of color tolerances at the National Bureau of Standards. *Amer. J. Psychol.*, 1939, **52**, 418-428.—"The various parts of a color specification to be administered by working standards have required different methods for color-tolerance specification. Choice of method is also affected by the article whose color is specified and by the instruments used." The methods discussed are: (1) the ICI system, which applies to color specifications not requiring account of the perceptibility of differences, though it yields a precise and reproducible specification of color tolerance in fundamental terms; (2) material standard and tolerance sample (sense-distance judgment in Boring's terminology, and "ratio method" in Newhall's terminology), which has the disadvantage that it is not precise; and (3) the NBS unit of surface-color difference, which is still in the experimental stage, but promises much.—*D. E. Johanssen* (Skidmore).

135. Kalmus, H. Die Orientierung der Bienen im Stock. (The orientation of bees on a plant.) *Forsch. Fortsch. dtsh. Wiss.*, 1938, **14**, 21-22.—*P. L. Krieger* (Leipzig).

136. Karbowski, M. [The diagnostic significance of color fields.] *Klin. Oczna*, 1939, **17**, Part 2, 187.—Diagnostic significance of qualitative color fields is increased by the use of physiologically equivalent test objects, which are more suitable for demonstration of pathological changes than test objects of equal size. It was found that 5 mm. blue, 2 mm. red, and 4 mm. green are physiologically equivalent.—*D. J. Shad* (Institute of Ophthalmology, New York City).

137. Katz, D. Un appareil sensoriel primitif: la langue. *Recherches psychophysiologiques*. (A primitive sensory apparatus: the tongue. Psychophysiological researches.) *J. Psychol. norm. path.*, 1938, **35**, 457-472.—This research on the tongue was conducted from an evolutionary point of view. It tends to show that the tongue transmits impressions which are particularly old, aquatic, and primitive. Life had its origin in water, and it was in water that the first steps in evolution were made. The tongue is the only human organ which continues to exercise its function in a condition of maximum wetness. The tongue is connected with our recognition of thirst and thus with regulating the water content of the body. The author also discusses the taste sensations produced on the tongue by electric currents, and points out that if the tongue touches a small wound, the same taste sensation arises as at the anode of the electric system.—*R. E. Perl* (New York City).

138. Knudsen, V. O. Hearing aids today and tomorrow. *Amer. Ann. Deaf*, 1939, 84, 316-321.—A discussion of recent advances in electrical hearing aids for deaf children from both the technological and the practical point of view. Results of tests are presented showing advantages of binaural hearing aids over monaural sets. Progress is reported on the development of selective amplification to fit the individual audiogram.—C. V. Hudgins (Clarke School).

139. Laird, D. A. Does denture wearing affect the sense of taste? *J. Amer. dent. ass.*, 1939, 26, 1518-1519.—50 individuals of both sexes (ages 50 to 68 years) indicated their preferences among 5 mixtures of pineapple juice varying in sweetness. The curves of those wearing dentures varied but little from those without; the slight shift of taste preference "away from the sweet by the men wearing dentures [is probably] due less to the presence of the dentures and more to physiologic and anatomic conditions of the mouth and tongue."—F. W. Finger (Brown).

140. Laird, D. A., & Breen, W. J. Sex and age alterations in taste preferences. *J. Amer. diet. Ass.*, 1939, 15, 549-550.—160 subjects of both sexes and various ages were tested for their preferences among 5 preparations of pineapple juice varying by equal intervals in sweetness. The method of paired comparisons revealed that the curve for the group 12 to 18 years old paralleled that of the 20- to 40-year group, with considerable preference for the sweeter mixtures. In the 50- to 68-year group there was a shift in the direction of the more tart juices. This seems to strengthen the supposition that there are definite alterations in food enjoyment with advancing age, probably on the basis of structural and functional changes of the taste buds. The results also indicate that the women's taste preferences incline in the direction of the preferences of the aging group.—F. W. Finger (Brown).

141. Leukart, R. H. The speed of monocular accommodation. *J. exp. Psychol.*, 1939, 25, 257-270.—In the technique used in this experiment the action of the extra-ocular muscles (of the eye being used) was eliminated. An objective criterion of accommodation was employed. Results indicate that, in a group of persons, the average accommodation time for the left eye is approximately equal to that for the right eye (.322 sec.). For the distance at which the test objects were placed in this experiment (1 m and 4 m), there is no difference between the time required for near-to-far and for far-to-near accommodation. Inspection of individual readings of right and left eyes indicates that the fact that there is no reliable difference in means for left eye and right eye is a function of probability. For far-to-near accommodation, 13 S's (about 93%) show a difference in time for right and left eye of more than .060 sec. (the approximate unit of measurement). For near-to-far accommodation, this same situation is observed in 50% of the cases.—H. W. Karn (Pittsburgh).

142. Livingston, P. C. Analysis of the judgment of relative position. *Brit. J. Ophthal.*, 1939, 23, 540-544.—This paper concerns a preliminary investigation of certain features of binocular vision which appear to have a close association with depth perception. Two pieces of apparatus are described. One is a rotary depth perception apparatus which is based on the principle of the three pins of Helmholtz, but which permits rotation of the pins in parallel; the other consists of a rotating stereogram and pictures. With the first apparatus great differences are shown in the ability to analyze depth according to the rotated position of the pins (secondary cues, including artificial parallax, having been largely eliminated). From the results obtained with the second apparatus "it seems that when a series of objects in space is regarded either predominantly through one eye or with perfect evenness of reception through both, the essential parallax effect brought about by alternation is missing, and accurate analysis with regard to relative position becomes faulty."—R. J. Beitel, Jr. (American Optical Company).

143. Lüscher, E. Untersuchungen über die Beeinflussung der Hörfähigkeit durch Trommelfellbelastung. (Studies of the influence of loading of the tympanic membrane upon audition.) *Acta otolaryng.*, Stockh., 1939, 27, 250-266.—"Various types of disturbances of sound conduction were created in persons of normal hearing by means of various types of loading of the tympanic membrane, and air-conduction audiograms showing these disturbances were made. . . . The amount of loss of hearing created by tympanic membrane loading depends to a great extent upon the type of loading used. Punctiform loading of the umbo has only a slight effect and acts only upon the low and middle tones. Surface loading of the pars tensa acts relatively strongly, limiting particularly the middle and higher sound ranges. The effect of the pars tensa loading is ascribable to the associated limitation of oscillation of the tympanic membrane. Hence the pars tensa loading plays an important role in the reception of sound, particularly of high frequencies. The classic theory that the loss of hearing is predominantly at the lower end of the tone scale applies only to a part of middle-ear deafness," some types of the latter influencing "predominantly the tones of the middle to upper end of the tone series."—E. M. Pilpel (New York City).

144. MacAdam, D. L. Representation of color tolerance on the chromaticity diagram. *Amer. J. Psychol.*, 1939, 52, 412-418.—"Actual practice in the establishment of color tolerances indicates that visual examination of a representative group of samples, and agreement between the manufacturers and representative users of the colored materials, is more satisfactory to all parties concerned than any theoretical deduction of tolerances from abstract experiments. Tolerances established by such agreement can be represented just as clearly on the ICI chromaticity diagram as on any other chromaticity diagram. The ICI chromaticity diagram is recom-

mended for such use because it has been standardized internationally and used extensively for many years, and because its use will not encourage any false simplifications of the color tolerance problem."—*D. E. Johannsen* (Skidmore).

145. **Makepeace, R.** An auditory analysis of the vibrato. *Psychol. Bull.*, 1939, 36, 647.—Abstract.

146. **Mead, L. C.** Thresholds of visual intensity-discrimination in phylogeny. *Amer. J. Psychol.*, 1939, 52, 465-467.—The author tabulates the results obtained in 19 different investigations on brightness discrimination in animals of different species, and shows that there is an increase in the capacity for brightness discrimination from the lower to the higher mammalian forms. The writer suggests that this development may be a function of retinal rather than neurological modifications.—*D. E. Johannsen* (Skidmore).

147. **Merker, E.** Unterschiede in der Lichtdurchlässigkeit der Augenlinsen von Wirbeltieren. (Differences in the translucence of the ocular lenses of vertebrates.) *Forsch. Fortsch. dtsh. Wiss.*, 1939, 15, 190-192.—*P. L. Krieger* (Leipzig).

148. **Miles, W. R.** Visual-tactual illusions from a crystal ball. *Amer. J. Psychol.*, 1939, 52, 449-452.—*D. E. Johannsen* (Skidmore).

149. **Nafe, J. P.** Determiners of adaptation time. *Psychol. Bull.*, 1939, 36, 632.—Abstract.

150. **Newhall, S. M.** The ratio method in the review of the Munsell colors. *Amer. J. Psychol.*, 1939, 52, 394-405.—The present paper describes the ratio method of determining color tolerance and presents some preliminary results of its application. The ratio method, originated by Richardson and first applied by him to color, consists of the estimation by direct impression of the ratio of supraliminal sense magnitudes. One magnitude is taken as a standard and the ratio of the other to it is estimated directly. The different purposes for which this method is usable and the different forms which it takes are described. The method proved useful for correcting the allocation of the 400 Munsell colors.—*D. E. Johannsen* (Skidmore).

151. **Olson, H. F., & Massa, F.** Applied acoustics. (2nd ed.) Philadelphia: Blakiston, 1939. Pp. 494. \$5.50.

152. **Platz, E.** Wahrnehmung und Erinnerung bei der Futterwahl von Vögeln. (Perception and retention in food selection among birds.) *Z. Tierpsychol.*, 1939, 3, 1-29.—Experiments were carried out under conditions which simulated natural conditions as closely as possible. The principal results were: (1) The goldfinch showed greater ability for discrimination than the siskin. (2) Some preference was shown by each for particular kinds of food. (3) Larger masses were preferred to smaller ones, a factor which sometimes overbalanced a slight preference for a particular kind of food. (4) Food preferences were sometimes influenced by numerous incidental factors which were not easily understood.—*G. M. Gilbert* (Connecticut College).

153. **Sato, N.** [Audition in frogs.] *Okayama Med. J.*, 1939, 51, 729-730.—Certain changes in respiration and skin reflexes to sound stimuli occurred when n. vagus, ramus acusticus anterior, or ramus acusticus posterior was cut, or when macula lagena, macula neglecta, or papilla basilaris, each connecting with ramus acusticus posterior, was burned off; this seems to show that papilla basilaris is very significant in audition. This is believed to be an additional proof for the resonance theory, since it was assumed that the entire basilar membrane participated in vibration.—*R. Kuroda* (Keijo).

154. **Silverman, S. R.** Inadequacies of current hearing tests for school children. *J. except. Child.*, 1939, 6, 22-25.—The 4-A audiometer was found inadequate in that not all of the elements of English speech are included in the digits used; the 2-A individual audiometer was found not to be calibrated finely enough to insure a complete picture of the child's hearing loss; wrong interpretations of the audiograms derived from testing, employment of poorly trained investigators, lack of a standard nomenclature for describing results of tests, absence of standard testing conditions, and the unavailability of adequate means for testing young children are further weaknesses that defeat the intended purpose of hearing tests.—*L. A. Averill* (Worcester Teachers College).

155. **Suzuki, K.** Shikimô no reshû ryôhō. (Cure of color blindness by practice.) *Rinshô Kenkyû*, 1938, 10, 6.—The author says that he was able to get excellent results in curing a large number of patients suffering from color blindness by practice during the past 17 years. The textbook used was Sato's table for controlling color blindness by practice. Judged from the effect of practice as compared with no practice it was shown by the use of an anomaloscope or of Holmgren's color wools that anomalies were successively decreased with practice and the patients thus treated could copy colored pictures or make a colored sketch very effectively.—*R. Kuroda* (Keijo).

156. **Tinbergen, N., & Kuenen, D. J.** Über die auslösenden und die richtunggebenden Reizsituationen der Sperrbewegung von jungen Drosseln (*Turdus m. merula* L. und *T. e. ericetorum* Turton). (On the adequate and direction-determining stimulus situations for the feeding reaction in the young thrush.) *Z. Tierpsychol.*, 1939, 3, 37-60.—Numerous stimuli evoke the feeding response (opening the beak) in the young thrush. These include: tapping the nest, touching the beak, a puff of air, and certain visual stimuli, all of these resembling certain aspects of the natural feeding situation. The author concludes that the reaction is a native and not a learned response.—*G. M. Gilbert* (Connecticut College).

157. **Trautwein, F.** Über Näherungswerte zur Berechnung temperierter Schwingungszahlen. (Approximate values for calculating tempered vibration frequencies.) *Akust. Z.*, 1939, 4, 261-262.—For the tempered small third and the tempered large second the proportions 44/37 and 55/49 are very good

approximate values. Consequently the difference in the number of vibrations for two neighboring half tones equals 1/20 of the number of vibrations for the large tempered second of the higher. The application of the number relationships in the construction of the electric organ is discussed.—P. L. Krieger (Leipzig).

158. Trendelenburg, W. [The best light quality for the anomaloscope and the question of transitional cases between the normal and protanomaly.] *Klin. Mbl. Augenheilk.*, 1939, 108, 769.—Interpretation of anomaloscope readings complicated by variations in spectral distribution of luminosity, is simplified by the use of quotient calculations showing the deviation of an anomalous case from normal.—D. J. Shaad (Institute of Ophthalmology, New York City).

159. Tschermak-Seysenegg, A. Über das zweifügige Sehen der Wirbeltiere. (Binocular vision of vertebrates.) *Forsch. Fortschr. dtsh. Wiss.*, 1939, 15, 272-273.—All vertebrates have binocular and in fact plastic-stereoscopic vision, although this may be spatially very limited because of the lateral position of the eyes and consequent divergence of their axes, in contrast to the position in man, apes, and owls. Completeness of the optic chiasm is no ground for exclusion; the possibility of a posterior crossing within the brain exists. Furthermore, the resulting immediate impression of depth arises from the so-called parallax of movement of different distant objects with sudden change of position of the head.—P. L. Krieger (Leipzig).

160. Vesser, M., & Huff, T. Comparison of color combinations under tungsten and daylight illuminations. *J. gen. Psychol.*, 1939, 21, 225-228.—Affective and preferential values of color combinations under adjacent tungsten and daylight illuminations were determined for 78 women. The two illuminants had different spectral energy distributions, leading to variations in value of combinations under them. "Results . . . show that tungsten and daylight illuminations . . . alter the appearance and the affective and preferential values of a two-color or three-color combination under the specified conditions of the experiment. Red and brown in combinations were more pleasant and greatly preferred under the tungsten light, whereas green, blue, black, and white in combinations were more pleasant and greatly preferred under the daylight. Yellow in combination was pleasant under both lights. In combinations, colors with a spectral composition somewhat like the energy distribution of the illuminant were preferred to, and rated more pleasant than, colors less similar to the illuminant."—C. N. Cofer (Brown).

161. Wagoner, K. S. Sensory adaptation. *Psychol. Bull.*, 1939, 36, 632.—Abstract.

162. Wallace, S. R., Jr. Configurative effects in binocular interdependence. *Psychol. Bull.*, 1939, 36, 606.—Abstract.

163. Weber, H. Das Konsonanzproblem und die Struktur des Wahrnehmungsvermögens. (The con-

sonance problem and the structure of perceptual ability.) *Forsch. Fortschr. dtsh. Wiss.*, 1938, 14, 9-11.—P. L. Krieger (Leipzig).

164. Weber, H. Das Farbe-Ton-Problem und die Struktur des Wahrnehmungsvermögens. (The color-tone problem and the structure of perceptual ability.) *Forsch. Fortschr. dtsh. Wiss.*, 1938, 14, 268-272.—P. L. Krieger (Leipzig).

165. Weber, H. Über die psychophysischen Grundlagen der Ton- und der Farbenharmonie. (The psychophysical bases of tone and color harmony.) *Forsch. Fortschr. dtsh. Wiss.*, 1939, 15, 248-250.—P. L. Krieger (Leipzig).

166. Weitz, J. Proprioception and vibratory sensitivity. *Psychol. Bull.*, 1939, 36, 605.—Abstract.

167. Wolff, P. G. The etiology, diagnosis and therapy of hysterical amaurosis. *Amer. J. Optom.*, 1939, 16, 307-312.—Not merely absence of organic lesions, but evidence of psychic disturbance such as history of emotional shock or tension should be sought before making a diagnosis of hysterical blindness. Vision is practically always recovered in cases of hysterical amaurosis, but recovery may be hastened by suggestion reinforced by alleged therapeutic measures.—M. R. Stoll (Ohio State).

[See also abstracts 7, 15, 67, 76, 177, 195, 196, 223, 245, 260, 341, 391, 444, 454, 485, 535, 541, 543, 551, 559.]

LEARNING, CONDITIONING, INTELLIGENCE

(incl. Attention, Thought)

168. Abel, T. M., & Sill, J. B. The perceiving and thinking of normal and subnormal adolescents and children on a simple drawing task. *J. genet. Psychol.*, 1939, 54, 391-402.—More than 400 S's were shown individually a 4-inch square on paper and told to divide it (A instruction) "into squares," or (B instruction) "into smaller squares." Of the 6 kinds of responses obtained, the 2 commonest were ordinary cross-sectioning and drawing of a nest of concentric squares. Adolescents and children of normal or higher intelligence (IQ 80-130) employed cross-sectioning most frequently after both instructions, but subnormal adolescents (IQ 50-79) responded to B instruction most frequently with nests. The frequency of cross-sectioning responses increased with increasing MA, while that of nests and of other types of responses decreased. Both qualitative and quantitative differences appeared and the performances of different groups displayed some overlapping.—D. K. Spelt (Mississippi).

169. Arakelian, P. Cyclic oscillations in the extinction behavior of rats. *J. gen. Psychol.*, 1939, 21, 137-162.—Frequency and amplitude of pressures on a horizontal bar in a modified Skinner box were recorded on a kymograph drum. Food could be released when the bar was pressed. Habituation of the 75 rats to the box was followed by training to

press the bar for food; then this response was extinguished. Criterion of extinction was 5 minutes during which the rat did not touch the bar. Strength of response in grams and inter-response interval times were measured. Mean time intervals between reactions increased and vigor of reactions decreased as extinction went on. There were suggestions of a cyclic alternation between long and short intervals and between strong and weak pressures in reactions during extinction. Long intervals were followed by weaker responses than were short intervals. "For several reactions preceding long intervals between reactions the mean strength of response was found to decrease progressively and for several reactions following it tended to increase." Short intervals were followed by increased pressures. "For several reactions, both preceding and following short intervals between reactions, the mean strength of reaction was found to decrease progressively."—C. N. Cofer (Brown).

170. Arndt, W. *Abschliessende Versuche zur Frage des "Zähl"-vermögens der Haustaube.* (Crucial experiments on the problem of the "counting" ability of the pigeon.) *Z. Tierpsychol.*, 1939, 3, 88-142.—Although no actual "counting" ability or concept of number can be ascribed to the pigeon, its ability to distinguish number is comparable to that of man under conditions which preclude counting. It can be trained to make the distinction between 5 and 6 (corn kernels) without geometric cues, and to pick any number of kernels up to 6 from a larger quantity.—G. M. Gilbert (Connecticut College).

171. Baker, L. E., & Metzner, C. A. Psychoanalytic 'catharsis' in a CR situation. *Psychol. Bull.*, 1939, 36, 630.—Abstract.

172. Baxter, B. An experimental analysis of speed and level in intelligence testing. *Psychol. Bull.*, 1939, 36, 637.—Abstract.

173. Bayroff, A. G. The effect of early isolation of white rats on competition in swimming. *Psychol. Bull.*, 1939, 36, 597.—Abstract.

174. Bierens de Haan, J. A., & Bijlmer, L. *Verhaltenstendenzen weisser Mäuse in einem Labyrinth. 1. Richtung auf das Ziel, Antizipation und Beibehaltung der Laufrichtung.* (Positional tendencies of white mice in a maze. 1. Turning toward the goal, anticipation, and retention of direction.) *Z. Tierpsychol.*, 1939, 3, 30-37.—The purpose of this experiment was to determine whether certain characteristic aspects of the behavior of rats in a maze could be found in mice. 10 mice were run once each day for 40 days through the Spence and Shipley maze. The results showed that mice could learn the maze as easily as rats, but in contrast to the latter showed a preference for alleys on the left. As in rats, there was a tendency to run into alleys on the side of the goal, as well as an anticipation of the last turn and the retention of an originally chosen direction. The anticipation of the last turn was not as strongly developed as is the case with rats.—G. M. Gilbert (Connecticut College).

175. Bills, A. G. The mental fatigability of malnourished and of mentally defective children. *Psychol. Bull.*, 1939, 36, 624.—Abstract.

176. Bowers, E. V. A study of the influence of the experiential factor in intelligence test scores. *Psychol. Bull.*, 1939, 36, 636.—Abstract.

177. Bridgman, O. The estimation of mental ability in deaf children. *Amer. Ann. Deaf*, 1939, 84, 337-349.—90 deaf children were examined, 83 of whom were sent to the clinic because of school failure or because of behavior problems; the remaining 7 were used as controls. Both verbal and non-verbal tests were used. None of the tests were adequate in predicting school success or failure. 17 of the problem children gave IQ's above 90 and compared favorably with the control group. Factors other than intelligence which may be considered as accounting for the school failures among deaf children are: brain injury or brain disease causing disturbances other than deafness; combinations of social, economic, and educational causes which retard even normal children in school progress. Three case histories are presented to illustrate the type of detailed study necessary in the solution of the problems presented by deaf children.—C. V. Hudgins (Clarke School).

178. Brogden, W. J. Sensory pre-conditioning. *J. exp. Psychol.*, 1939, 25, 323-332.—Dogs given 200 successive combinations of bell and light will respond with flexion to one of these when the other has been made a conditioned stimulus for flexion by appropriate training with shock. Control animals, which were not given bell and light in combination, did not respond, or responded very infrequently, to the stimulus never presented with shock.—H. W. Karn (Pittsburgh).

179. Bromer, J. A. An experimental study of oddity-abstraction in the monkey. *Psychol. Bull.*, 1939, 36, 635.—Abstract.

180. Brown, W. Errors in trial and error learning. *Psychol. Bull.*, 1939, 36, 649.—Abstract.

181. Brundage, E. G., & Kellogg, W. N. Bilateral conditioning as an indication of side preference. *Psychol. Bull.*, 1939, 36, 625.—Abstract.

182. Bumatay, E. F. Predictability of performance at a locus in the learning process: a dynamic theory of learning. *J. gen. Psychol.*, 1939, 21, 187-202.—A "water group" and a "food group" composed of 6 male white rats each, 139 days old at the beginning of the experiment, ran a 6-unit tunnel maze. Retracing was prevented. One run was made each day, the position of the objective being shifted daily, so that on successive days the animal had to make his final turn to right, to left, to right, etc. Three animals adjusted "their behavior with the shift in the position of the objective," so it is believed that the rat has memory and a conception of time. The rats showed a "retention span" of 48 hours. It is stated that in learning "there exists a level or stage at which predictability as to whether or not the subject under consideration is able to

cope with a given intellectual activity is highly possible." This is the "locus of learning."—C. N. Cofer (Brown).

183. Calvin, J. S. The effects of regularity of stimulation in conditioned-response learning. *Psychol. Bull.*, 1939, 36, 596.—Abstract.

184. Carter, H. D. Resemblance of twins in speed of association. *Psychol. Bull.*, 1939, 36, 641.—Abstract.

185. Cason, H. Correlations between different forms of learning. *Psychol. Bull.*, 1939, 36, 635.—Abstract.

186. Courts, F. A. Relations between experimentally induced muscular tension and memorization. *J. exp. Psychol.*, 1939, 25, 235-256.—With successive degrees of dynamometer tension, induced by gripping with the right hand, memorization of nonsense syllables is progressively more efficient until an optimal tension is reached. Higher degrees of tension result in successive decrements in performance. There is no evidence for a differential effect of experimentally induced tension for good and poor memorizers. The influence of dynamometer tension on memorization is not significantly different for subjects who normally maintain a high degree of tension during memorization and subjects who normally memorize under a low degree of tension.—H. W. Karn (Pittsburgh).

187. Cowles, J. T. A direct comparison of 3 methods of "delayed response." *Psychol. Bull.*, 1939, 36, 598.—Abstract.

188. Crannell, C. W. Hesitation time and correctness of choice in rats. *Psychol. Bull.*, 1939, 36, 644.—Abstract.

189. Dickenson, H. F. Oral group rational learning test. *Psychol. Bull.*, 1939, 36, 619.—Abstract.

190. DuBois, P. H. The sex difference on the color-naming test. *Amer. J. Psychol.*, 1939, 52, 380-382.—149 college men and 133 college women acted as S's in the present experiment. All were given the Woodworth-Wells color-naming test (oral response), the word-reading test, and a non-verbal form of the Woodworth-Wells test. The women were consistently better than the men on all three tests, though the largest and most reliable differences were on the non-verbal form of the test. This is interpreted to mean that the sex difference is not a function of verbal facility but is due to a special "color-recognizing" factor.—D. E. Johannsen (Skidmore).

191. Edwards, A. L., & English, H. B. The effect of the immediate test on verbatim and summary retention. *Amer. J. Psychol.*, 1939, 52, 372-375.—Different but comparable groups of college students read and heard read an unfamiliar passage, and were then tested for verbatim and summary recognition of the material. The retest periods were: Group A, immediate, 60 and 90 days; B, 5 days; C, 10 days; D, 15 days; and E, 20 days. The control group had not heard the passage read at all, and was tested after 30 and after 60 days. It was found

that the verbatim scores dropped sharply after the immediate test, while the summary scores rose or remained relatively constant. The control group's mean scores remained the same on both tests. Where there was no immediate test the falling off of the mean test score was much more rapid for the verbatim test, and the rise in the mean score for the summary test was slower. The importance of these data for educational procedures is emphasized.—D. E. Johannsen (Skidmore).

192. Elder, J. H. Tests of imitation in chimpanzees. *Psychol. Bull.*, 1939, 36, 595.—Abstract.

193. English, H. B., & Edwards, A. L. Studies in substance learning and retention: XI. The effect of maturity level on verbatim and summary retention. *J. gen. Psychol.*, 1939, 21, 271-276.—300 5th- and 6th-grade children read and concurrently heard read an unfamiliar story 1500 words in length. Half of the subjects took a multiple-choice test and half a true-false test immediately after and (without previous warning) 30 days after the reading. Two kinds of items were used in the tests: (1) items reproducing almost exactly the wording of the passage, and (2) items summarizing sections of the passage. The corrected reliability (split-half technique) was .86 for the multiple-choice test and .80 for the true-false test. Significant increases in error scores from test 1 to test 2 were found in both multiple-choice and true-false tests for verbatim items (type 1). Insignificant increases were found for the summary items. Implications of the results for classroom examinations are developed. "A duplicity theory of learning processes seems the simplest hypothesis to fit the facts."—C. N. Cofer (Brown).

194. Freeman, G. L. Changes in tension-pattern and total energy expenditure during adaptation to "distracting" stimuli. *Amer. J. Psychol.*, 1939, 52, 354-360.—The present study was undertaken in an attempt to reconcile the apparently incompatible results of Morgan and Davis upon the effects of mental work. In the present study, 2 S's did addition problems for 20 min. a day for 12 days; the working period was divided into two equal parts, one under quiet and one under noise conditions. The work period was preceded by a 40-min. rest period. Oxygen consumption and action potentials from the 4 limbs were recorded during the work periods and the last 10 min. of the rest period. The average number of correct solutions under the noise condition was 78.8%, under quiet 80.4%. The oxygen consumption was high under the noise condition on the first days of work, but it gradually approached the level of the quiet periods. There was less electromyographically recorded activity during the basal rest than during either work period. The theoretical implications of these data are discussed.—D. E. Johannsen (Skidmore).

195. French, R. L. A method of studying olfactory discrimination in the white rat. *Psychol. Bull.*, 1939, 36, 643-644.—Abstract.

196. Galt, W. E. The capacity of the rhesus and cebus monkey and the gibbon to acquire differential

response to complex visual stimuli. *Genet. Psychol. Monogr.*, 1939, 21, 387-457.—Four series of tests on a progressively complex discrimination task involving ambivalent and antagonistic cue combinations were given to three rhesus and two cebus monkeys and one gibbon. The reaching method was used until failure occurred, when a shift was made to the pulling-in technique. In general the quality of performance was poorest in the rhesus monkeys, followed by the gibbon. The final series of tests was so complicated that "neurotic" behavior occurred in one of the cebus monkeys; this behavior was still evident seven months after the end of the experiment. Some discussion is given on temperamental traits. The cebus monkeys continued working "in spite of the fact that they did not eat the incentive after obtaining it." The findings are discussed in terms of differential cortical development. The literature is reviewed and 64 references are cited.—*F. M. Teagarden* (Pittsburgh).

197. Gottsdanker, R. M. An experimental study of fixation of response by college students in a multiple-choice situation. *Psychol. Bull.*, 1939, 36, 649.—Abstract.

198. Grant, D. A. The influence of attitude on the conditioned eyelid response. *J. exp. Psychol.*, 1939, 25, 333-346.—In this investigation light was used as the conditioned stimulus followed by a puff of air to the eye as the unconditioned stimulus. One group of subjects was instructed to maintain an expectant attentive set toward the conditioned stimulus, especially at the moment of appearance. In order to see that this attitude was consistently maintained from trial to trial, the subject was instructed to make a tapping response with his finger when the stimulus appeared. A second group of subjects was instructed to fixate the source of the conditioned stimulus but in other respects to adopt a passive attitude toward the stimulus. Results were as follows: (1) All subjects reported that their conditioned eyelid responses were involuntary. (2) The majority of the subjects reported a mounting expectation of the puff during each trial, and this resulted in an impulse to close the eye. (3) The initial CR's were obtained at an earlier trial, on the average, with the active group than with the passive group. (4) CR's occurred more frequently in the active group. (5) Conditioning was more stable in the active group. (6) The average amplitude of the CR's was greater in the active group. (7) The average latency of the CR's was lower in the active group, but this trend was not uniform during the entire reinforcement series.—*H. W. Karn* (Pittsburgh).

199. Grant, D. A. The influence of attitude on the conditioned eyelid response. *Psychol. Bull.*, 1939, 36, 625.—Abstract.

200. Grinstead, A. D. Bodily movements accompanying problem-solving activity. *Psychol. Bull.*, 1939, 36, 620.—Abstract.

201. Guthrie, E. R. The effect of outcome on learning. *Psychol. Rev.*, 1939, 46, 480-485.—The

criticisms offered by T. L. McCulloch of the author's formulations on the manner in which the effects of an action influence learning are admittedly well founded. In place of the theory that the successful act or series of acts is learned because it is always the last association with the drive, and that it remains because the drive has been removed by the consummatory response, McCulloch suggests that the effect of the correct or successful action is not to remove the drive, but to inhibit the precurrent restless behavior and remove excitement. Guthrie himself had called attention to this same point in another connection.—*A. G. Bills* (Cincinnati).

202. Hall, B. E. Transfer of training in mirror tracing. *J. exp. Psychol.*, 1939, 25, 316-318.—"Transfer from 10 trials of mirror-tracing a star-shaped maze with mirror in one position (right, left, center) to a second or third position was tested with 6 groups of 10 subjects each, using all possible combinations of temporal order of right, left, and center mirror positions. The average transfer with the 6 groups is considerably less than in cross-education experiments: 45 percent from position 1 to position 2, and 18 percent transfer from position 2 to position 3."—*H. W. Karn* (Pittsburgh).

203. Harlow, H. F. Pseudo-conditioned responses in the cat. *Psychol. Bull.*, 1939, 36, 625.—Abstract.

204. Hebb, D. O. Intelligence in man after large removals of cerebral tissue: report of four left frontal lobe cases. *J. gen. Psychol.*, 1939, 21, 73-87.—Forms L and M of the Stanford-Binet, the Arthur performance scale, and the McGill revision of the Army Beta were used to determine the intellectual level of the four cases. The histories of the cases are presented. From 4.5 to 10% of the cerebra of the patients was removed, but there was "little suggestion of the frontal lobe signs described in pathological conditions." Three postoperative IQ's were above average, and there was no drop in IQ in one case where both pre- and postoperative tests were available. "The dominant hemisphere in all four patients appears to have been the left."—*C. N. Cofer* (Brown).

205. Hertzman, M., & Neff, W. S. The development of intraserial relationships in rote learning. *J. exp. Psychol.*, 1939, 25, 389-401.—The subjects in this experiment learned nonsense syllables by the method of anticipation. One group comprised those S's who had not succeeded in mastering the list in the learning series; Group A consisted of those S's who had overlearned the list from 1 to 3 trials; Group B contained those S's who obtained from 4 to 6 overlearnings; Group C contained all those who reported from 7 to 9 overlearnings. For the incomplete learners there is no particular response pattern, but the more remote associations are at least as frequent as they are in the higher degrees of mastery. For the A group a U-shaped pattern appears in which the medium remote associations are given less frequently than either the low or high order associations. For the B group a definite gradient is estab-

lished with respect to the forward associations. The backward associations exhibit a sharpening of the gradient in frequency of responses as the associations become more remote. For the highest degree of mastery, Group C, the most marked deviations from Group B lie in the increase of seventh-order backward associations, which may be thought of as being first-order forward associations if there is some circularity in the learning.—H. W. Karn (Pittsburgh).

206. Hildreth, G. Comparison of early Binet records with college aptitude test scores. *J. educ. Psychol.*, 1939, 30, 365-371.—The mental status of 70 pupils, first determined with the 1916 Stanford-Binet test during the elementary-school period (median age 9 years and 9 months, median IQ 120), was compared with later American Council on Education Psychological Examination performance (the subjects were 16 to 18 years of age at the time of the second testing). Early IQ's were converted into percentiles for purposes of comparison. If a pupil is high originally he is apt to retain high status, but if he is low the prediction of ultimate status is less certain. Results for the whole population show more gain than loss. There were no reliable sex differences in percentile rank changes. Bibliography.—R. M. Bellows (Maryland).

207. Hiratsuka, T. Alcohol no seishin sagyô (ren-zoku kasan) ni oyobosu eikyô. (The effect of alcohol upon mental work—continuous addition.) *Psychiat. Neurol. japon.*, 1939, 43, 265-285.—This is a study on the effect of the so-called evening drink (in Japan) upon mental work. The results led the author to conclude that the quantity of alcohol contained in the evening drink (30 cc. absolute alcohol in 200 cc. water) generally gives a bad effect upon mental work; for instance, errors in addition and fluctuation of attention become great, the initial spurt is restrained, and fatigue appears early.—R. Kuroda (Keijo).

208. Hudson, B. B. One-trial learning in rats. *Psychol. Bull.*, 1939, 36, 643.—Abstract.

209. Humphreys, L. G. Acquisition and extinction of verbal expectations in a situation analogous to conditioning. *J. exp. Psychol.*, 1939, 25, 294-301.—Subjects were presented with two lights, a "conditioned stimulus" light and an "unconditioned stimulus" light. They were asked to write down on prepared blanks, in two series of 24 acquisition and 12 extinction trials, whether or not they expected the US light to be turned on after the CS light appeared. Thus their verbal anticipations of the US light served as the CR's. Two series of presentation orders, I and II, were composed, analogous to the situations of 100% and 50% reinforcement used in a previous conditioning experiment. When a comparison is made between the conditioning and the verbal expectancy experiments, the following conclusions can be drawn: (1) Series I shows acquisition of verbal anticipations comparable to the frequency of CR's under 100% reflex reinforcement. (2) The extinction curve for Series I shows the rapid, negatively accelerated drop characteristic of extinction

following 100% reflex reinforcement. (3) The extinction curve for Series II shows a much slower drop than Series I, this being characteristic of extinction following 50% reflex reinforcement. These conclusions confirm the hypothesis that the greater resistance to extinction following 50%, as contrasted to 100%, reflex reinforcement is due, at least in part, to greater difficulty in forming an expectancy of continuous non-reinforcement.—H. W. Karn (Pittsburgh).

210. Humphreys, L. G. Generalization as a function of method of reinforcement. *J. exp. Psychol.*, 1939, 25, 361-372.—Generalization of conditioned psychogalvanic responses in human subjects to tones 5, 15, and 25 j.n.d.'s distant from the reinforced tone were investigated under two conditions. One group of subjects was given 100% reinforcement for 16 trials, followed by 8 non-reinforced test trials. Another group was given 50% reinforcement for 16 trials, followed by 8 non-reinforced trials. With half the subjects the octave of the reinforced tone was presented in place of the 25 j.n.d. tone to determine the importance of generalization of consonance vs. disparity in frequency. The following conclusions are drawn: (1) Responses to the reinforced tone are higher than generalized responses following 100% reinforcement. A negatively accelerated gradient is suggested by means and medians. (2) Complete generalization is obtained following 50% reinforcement. This suggests a phase of positive acceleration. (3) Responses to the octave of the reinforced tone are higher than responses to the 25 j.n.d. tone, although the former is about 26 successive j.n.d.'s removed. Thus gradients of generalization should not be based on j.n.d. units unless these units are perfectly correlated with decreasing similarity. An hypothesis concerning generalization gradients in discrimination is suggested.—H. W. Karn (Pittsburgh).

211. Irwin, O. C. Toward a theory of conditioning. *Psychol. Rev.*, 1939, 46, 425-444.—Successful experiments on conditioning of infants by Wenger and Kantrow suggest the necessity for a systematic theory of conditioning which will correct the inadequacies of Pavlov's theory. A re-analysis of the seven assumptions underlying Pavlov's interpretation of conditioning phenomena, such as his emphasis on contiguity, on the cortex as the exclusive organ of conditioning, on the reflex character of the response, on spatial projection, on irradiation and concentration, and on the brain as a passive inert receiver of impulses, shows these assumptions to be untenable. Wenger and Kantrow have demonstrated that (1) an original excitatory stimulus may become first inhibitory, then excitatory again; (2) feeding brings complete decrement; and (3) a partial decrement may be superimposed on an excitatory condition. After examining these findings in the light of several standard theories of inhibition, the author concludes that a theory of proprioceptive facilitation and inhibition offers the best explanation.—A. G. Bills (Cincinnati).

212. Jones, L. F. Factors in human salivary conditioning. *Psychol. Bull.*, 1939, 36, 625.—Abstract.
213. Kellogg, W. N. On the nature of skills — a reply to Mr. Lynch. *Psychol. Rev.*, 1939, 46, 489-491.—The author accepts Lynch's criticism in this issue (pp. 485-8), but emphasizes that skill represents an advanced stage of learning, and involves a change in the minute elements of the response without changing the general pattern of the response, hence is not a new act.—A. G. Bills (Cincinnati).
214. Kendall, W. E. Reliability of memory and testimony for visual presentation. *Psychol. Bull.*, 1939, 36, 634.—Abstract.
215. Klein, B. M. Beobachtungen an einer jungen Siamkatze über Vergessen und Erinnern in Bezug auf die Umgebung. (Observations on a Siamese kitten in regard to forgetting and remembering in relation to the surroundings.) *Zool. Garten*, 1939, 11, 24-31.—A cat showed in surroundings I and II exactly opposite attitudes toward the human sexes and toward strangers. Similarly, the urge to expansion was absent in environment I and excessive in II. When environment II was withdrawn, following environment I, the experiences and attitudes were not simply incorporated in environment I, but, on the other hand, they did not entirely disappear.—P. L. Krieger (Leipzig).
216. Laird, D. A. How to increase your brain power. New York: Crowell, 1939. Pp. 238. \$2.00.—The book develops the thesis for the layman that brain power can be increased through self-training in the "seven primary ingredients of brain power" recorded by L. L. Thurstone: number facility, word fluency, visualizing ability, memory, perceptual speed, induction, and verbal reasoning. In short chapters each of these "ingredients" is discussed and exercises suggested calculated to improve the ability of the reader in each category.—L. A. Averill (Worcester Teachers College).
217. Laird, J. H. Hume's account of sensitive belief. *Mind*, 1939, 48, 427-445.—An historical-critical account of the doctrine of belief in Hume's writings.—H. Helson (Bryn Mawr).
218. Ley, A., & Wauthier, M. L. Contribution à l'étude expérimentale de l'imagination. (A contribution to the experimental study of imagination.) *J. Psychol. norm. path.*, 1938, 35, 493-518.—The authors use several tests of literary creative imagination, such as sentence completion, similes, sentence formation using certain words, etc. They analyze the results statistically and conclude that this type of imagination is very rare in adults. Scores on tests of creative imagination do not form a regular distribution as do scores on an intelligence test, but rather are so distributed as to indicate that creative imagination is possessed by only a few.—R. E. Perl (New York City).
219. Lorge, I. Psychological bases for adult learning. *Teach. Coll. Rec.*, 1939, 41, 4-12.—Old interests of adults (or new ones which they can acquire) are ready to serve to motivate learning which adults are able to achieve. Although most motor skills and sensory acuity decline after the age of 25, "the generalization of mental decline as a function of age is, at the least, an exaggeration."—J. M. Stalnaker (Princeton).
220. Lumsdaine, A. A. Conditioned eyelid responses as mediating generalized conditioned finger reactions. *Psychol. Bull.*, 1939, 36, 650.—Abstract.
221. Lynch, J. M. A note on Kellogg's treatment of skills. *Psychol. Rev.*, 1939, 46, 485-488.—Although he assumes that all forms of learning, from conditioning and trial-and-error to Gestalt, belong to a common continuum, yet Kellogg sets acquisition of skills off from the rest as unique, involving neither addition nor subtraction, but mere perfection. This is objected to on the ground that skill learning involves new S-R connections, new insight, and the elimination of old reactions.—A. G. Bills (Cincinnati).
222. Mead, L. C. The effects of alcohol on two performances of different intellectual complexity. *J. gen. Psychol.*, 1939, 21, 3-23.—Experimental literature on the use of alcohol is summarized under the following headings: physiological effects, effects on motor and sensory capacity, effects on reflexes, effects on motor capacity, and effects on the higher mental processes. Six occasional drinkers took an artificial language test and were conditioned to retract a finger to a light followed by shock. Control and alcohol mixtures were ingested before these activities occurred. There was no effect of alcohol on the amount of conditioning shown as compared with that shown under control conditions, although there was more conditioning following any dose than after a period without doses. On the language test "the gain over the previous score is greater following a control than an alcohol dose. . . . It would therefore appear that 30 cc. of ethyl alcohol exhibited a more deleterious effect on higher mental performance than on simpler reflex functioning." Bibliography of 62 titles.—C. N. Cofer (Brown).
223. Metzner, C. A., & Baker, L. E. The pupillary response conditioned to subliminal auditory stimuli: a control experiment. *Psychol. Bull.*, 1939, 36, 625.—Abstract.
224. Munn, N. L. The relative effectiveness of two conditioning procedures. *J. gen. Psychol.*, 1939, 21, 119-136.—Two comparable groups of 26 rats each, 2 to 3 months old, were conditioned to light with shock as the unconditioned stimulus. 10 trials without shock were given, followed by training trials in which animals of the shock group were always shocked 2 seconds after onset of the light, whereas those of the "no-shock" group "escaped a shock if they responded to the light at least one-half second before the shock contact was made." A tambour-mounted cage was used, and the animals were unrestricted. The no-shock group took more trials than the shock group to reach a criterion of 10 consecutive anticipations of the light, but the critical ratio of the difference was only 1.4. However, the no-shock group reached this criterion with a significantly smaller number of shocks than the shock

group. The difference was not reliable for a criterion of 5 anticipations. Unreliable differences were found in the numbers of anticipations made by the two groups, but "acquisition curves . . . indicate a difference in favor of the no-shock animals that is consistently maintained throughout the course of conditioning." Linear Vincent curves of acquisition for the two procedures were obtained. Bibliography. —C. N. Cofer (Brown).

225. Munn, N. L. The relative effectiveness of two conditioning procedures. *Psychol. Bull.*, 1939, 36, 595-596.—Abstract.

226. Pintner, R., & Forlano, G. Season of birth and intelligence. *J. genet. Psychol.*, 1939, 54, 353-358.—Study of 5121 cases from the Southern Hemisphere and of 8985 cases of low IQ in the U. S. adds some weight to earlier findings that the mean IQ of winter-born children is somewhat lower than that of children born in other seasons.—D. K. Spelt (Mississippi).

227. Razran, G. H. S. Studies in configural conditioning: I. Historical and preliminary experimentation. *J. gen. Psychol.*, 1939, 21, 307-330.—Most of this paper is concerned with a review of literature on compound conditioning under these headings: (1) classification and general criticism of past experimentation; the kinds of compound conditioning (simultaneous, successive, and chained); (2) summary of past results from Russian laboratories. In the experiment here reported, Razran used alternate flashings of red and green light bulbs as patterned stimuli, and similar flashings of 2 red or 2 green or of single lights as non-patterned stimuli. The subject ate for two minutes, during which the lights were flashed, and then salivation was tested for five minutes by means of the cotton-roll technique. The subject was told that the purpose of the study was to discover the effect of eye fatigue on digestion. The results from 4 subjects show that "the existence of a special configural or pattern conditioning appears to be unmistakable." 3 subjects showed pattern conditioning from the first trial on; in the fourth subject it developed slowly. Training caused a tendency for pattern conditioning to become non-patterned and partitive and for non-patterned conditioning to assume patterned characteristics. There is a bibliography of 41 titles, mostly from Russian laboratories.—C. N. Cofer (Brown).

228. Razran, G. H. S. The law of effect or the law of qualitative conditioning. *Psychol. Rev.*, 1939, 46, 445-464.—It is contended that the law of effect is a special type of qualitative conditioning. It differs from the quantitative type in that not only a specific response is conditioned but also a general organismic quality, tendency, or affect. It consists mainly of the strengthening or weakening of one quality by another, rather than the substitution of one response for another. But it may influence, modify, or reverse the course of quantitative conditioning. An explanation of the variable effects of nocuous stimuli in learning is found in their tendency to arouse contradictory central tendencies—

an abient one when the stimulus is applied and an adient one when it is removed. False reward signals readily assume the characteristic of punishments, but false punishment signals do not as a rule become rewards. Qualitative conditioning deals with levels of responding, whereas pattern conditioning deals with stimulation levels.—A. G. Bills (Cincinnati).

229. Rethlingshafer, D. Comparison of measures of tendency-to-continue. *Psychol. Bull.*, 1939, 36, 609.—Abstract.

230. Roberts, A. D. The goal gradient in a circular pathway. *Psychol. Bull.*, 1939, 36, 597.—Abstract.

231. Robins, M. Reminiscence in the learning of a punchboard maze. *Psychol. Bull.*, 1939, 36, 620.—Abstract.

232. Ross, R. T. Discussion: Optimal orders in the method of paired comparisons. *J. exp. Psychol.*, 1939, 25, 414-424.—"Wherry's empirical lists are variants of Ross's rational lists, hence there is no fundamental conflict. . . . One additional criterion, suggested by Wherry and not used by Ross, is easily fitted into the Ross matrix. This provides for an alternation of position from left to right as the same item recurs in subsequent pairs. Formal proof is given that the modification provides an optimal arrangement. Wherry's only remaining criticism is of Ross's suggestion that fatigue effects may be reduced by repeating the lists in reverse order. Wherry suggests a laborious alternative, requiring the use of $2n$ lists and some multiple of $2n$ subjects. It is shown that all that is necessary to satisfy Wherry's demands is to use one list, half of the subjects going through in one order, half in the reverse order. The number of possible lists which may be derived from Ross's matrix is far larger than suggested by Wherry. He suggests that there are $8n$ possible lists; actually four times factorial n may be constructed, each satisfying the criteria."—H. W. Karn (Pittsburgh).

233. Rubin-Rabson, G. Studies in the psychology of memorizing piano music. I. A comparison of the unilateral and coordinated approaches. *J. educ. Psychol.*, 1939, 30, 321-345.—Four learning techniques were used: memorizing either hand before coordination, with and without interpolated keyboard trials; and coordinated learning from the beginning, with and without interpolated keyboard trials. Criteria of performance were number of trials necessary for learning, and trials necessary for relearning after two weeks. No reliable differences between any of the four techniques was found. Learning trials and transcription score correlated .72. Learning and relearning trials correlated .78. The sequence of unilateral trials preliminary to coordinated trials is favored. The interpolated keyboard practice gave either no advantage or positive interference with learning. Bibliography of 26 titles.—R. M. Bellows (Maryland).

234. Ryans, D. G. Changes in variability in "digit-symbol substitution" performance measured at the beginning and at the end of practice. *J. genet. Psychol.*, 1939, 54, 461-465.—When standard devia-

tions were taken as a measure, the variability of 2 groups of about 50 S's each increased from the beginning to the end of practice in digit-letter substitution, regardless of whether raw scores or derived scores for comparable practice periods were used. The differences were statistically significant.—D. K. Spelt (Mississippi).

235. Ryans, D. G. An observation of the changes in variability of high, medium, and low "intelligence" groups, measured at the beginning and at the end of "digit-symbol substitution" practice. *J. genet. Psychol.*, 1939, 54, 467-470.—The increase in variability from beginning to end of practice in substitution was greatest for the "medium intelligence group," and differences for that group were the most reliable found ($CR=2.0-2.5$).—D. K. Spelt (Mississippi).

236. Settlege, P. H. Tool-using in the rhesus monkey. *Psychol. Bull.*, 1939, 36, 635.—Abstract.

237. Shipley, W. C. The effect of a short rest pause on retention in rote series of different lengths. *J. gen. Psychol.*, 1939, 21, 99-117.—Since long series of nonsense syllables afford more opportunity for formation of remote associations and hence should contain greater amounts of inhibition at cessation of learning than short series, they should show relatively better retention following a pause than the short series. 16 subjects learned lists of 8, 14, and 20 3-letter nonsense syllables. 2 practice days were followed by 4 experimental days on each of which one list of each length was learned. The criterion of learning was 2 perfect successive recitations. In 2 of the 4 lists of each length a 2-minute rest pause "was introduced at the conclusion of the first trial on which the subject correctly anticipated one less than half the syllables of the list." Reading and problem solving occupied the S's during the rest. For the anticipation method the rest pause impaired retention of the lists; in the first part of the experiment this impairment was greatest for short lists, and later a somewhat spurious reversal occurred. Explanations are advanced for failure of reminiscence to appear and for disappearance of the predicted effect in the last part of the experiment.—C. N. Cofer (Brown).

238. Smith, M. B. Overnight changes in pursuit learning with 2 distributions of practice. *Psychol. Bull.*, 1939, 36, 642.—Abstract.

239. Stone, C. P. The use of discrimination habits by rats to follow the true pathways of unfamiliar maze patterns. *Psychol. Bull.*, 1939, 36, 644-645.—Abstract.

240. Terman, L. M., & Oden, M. Factors correlated with later success or failure of intellectually gifted boys. *Psychol. Bull.*, 1939, 36, 640.—Abstract.

241. Warden, C. J., & Gilbert, G. M. Testing animal intelligence (white rat and monkey). (Film.) New York: Columbia Univ., 1939. 450 ft., 16 mm. \$30.—The film includes the following tests: (1) Hunger drive in the white rat, using the Columbia obstruction method, with a table of comparisons

with other drives. (2) Maze learning in the white rat, showing stages of learning, followed by an animated learning curve. (3) Brightness and size discrimination tests in monkeys by the pulling-in method. (4) Tool using in monkeys, showing use of a series of rakes on single and double platforms in securing food. The film also shows an experimental neurosis in a rhesus monkey when the task became too difficult.—G. M. Gilbert (Essex Junior College).

242. Wells, F. L. The plan of search at various levels of abstraction. *J. gen. Psychol.*, 1939, 21, 163-185.—Various performances on a "hole in the board" test, concrete in nature, and the more abstract Stanford-Binet ball-and-field test are analyzed. In the latter test, in which "the subject is not looking for something actual" as he is in the first named test, the performances "show more system" in the search. A superior group of subjects, asked to verbalize the ball-and-field search procedure, produced two failures, nine 8-year plans, and twelve 12-year plans. Examples of these verbalizations as well as of some of the plans drawn are given. Difficulty in verbal expression of the search plan seems due to a lack of training "in the technology of English."—C. N. Cofer (Brown).

243. Wherry, R. J. A reply to Ross on orders in paired comparisons. *J. exp. Psychol.*, 1939, 25, 425-429.—The new revised matrix presented by Ross in his latest paper (*J. exp. Psychol.*, 1939, 25, 414-424) meets all of the criteria thus far proposed as well as they can be met in a single list. However, it still involves necessary weaknesses, and the author believes these to be best overcome by the method of multiplication and combination of lists which he originally suggested. "While these are absolutely necessary for a single subject working without rest, which would be the ideal condition if fatigue did not enter in, the advantages are still present in the alternative suggestion of using the proper combination of $2n$ lists, one for each of $2n$ equal groups of subjects."—H. W. Karn (Pittsburgh).

244. Wickens, D. D., & Wickens, C. A study of conditioning in the neonate. *Psychol. Bull.*, 1939, 36, 599.—Abstract.

245. Winslow, C. N. An experiment in the use of multiple conditioned stimuli and extinction in tests of hearing. *J. gen. Psychol.*, 1939, 21, 331-337.—Two normal cats were conditioned consecutively to an auditory and to a visual stimulus by the Dworkin motor alimentary conditioning method. The criterion of conditioning was 95 correct responses in 100 trials to both conditioned stimuli. After training the eighth nerve of one ear was sectioned. No loss in the CR to an electric bell was noted, showing that deafness had not developed. Nor was the CR to light impaired. Then the cochlea of the other ear was destroyed, and the auditory CR almost disappeared, whereas the CR to light maintained its previous level. Another cat, in which the eighth nerve was sectioned prior to conditioning, was able to develop CR's to both stimuli. Hence "deafness in the other two animals was produced by destruction of the

cochlea of the other ear, and not by the severing of the eighth nerve." "Extinction" of the auditory CR by the operation "did not irradiate to other stimuli in different sense fields." The multiple stimulus method here employed is satisfactory for testing hearing.—C. N. Cofer (Brown).

246. Wolf, I. S. Changes in general behavior during the conditioning of dogs. *Psychol. Bull.*, 1939, 36, 624.—Abstract.

247. Woodrow, H. The application of factor-analysis to problems of practice. *J. gen. Psychol.*, 1939, 21, 457-460.—The application of the technique of factor analysis to problems such as the question of a general learning ability, the problem of what abilities increase in amount as the result of practice (which "may probably best be solved by experiments on the transference of training"), and the question "concerning change with practice in the relative importance, or 'loadings,' of the different abilities which may be used in the execution of a task" is discussed.—C. N. Cofer (Brown).

248. Zeckel, A., & Kolk, J. J. v. d. A comparative intelligence test of groups of children born deaf and of good hearing, by means of the Porteus test. *Amer. Ann. Deaf*, 1939, 84, 114-123.—100 congenitally deaf and 100 hearing children between the ages of 7 and 14 years were given the Porteus maze tests. Each age group was matched for number and the two groups were matched for socio-economic background. The scores of the deaf children were inferior to those of the control group at each age level. The younger children in both groups found some difficulty in following the instructions for the tests; it is suggested that this may account for the fact that there was an increase in IQ with age in both groups. Children in the control group between the ages of 7 and 11 years had an average IQ of 89, while the older group, between 12 and 14 years, had an average IQ of 108. Deaf children in corresponding age brackets had average IQ's of 79 and 96 respectively. The hearing group reached an IQ level of 100 at the 10-11 year age level while the deaf group reached this point, on the average, two years later. Males were superior to females in both groups at all ages. The authors conclude: "deafness creates a mental backwardness which impedes also the development of regions of the intellect other than those developed by speech."—C. V. Hudgins (Clarke School).

249. Zeigler, T. W. Forced and optional intervals of presentation in the serial learning of nonsense material. *J. gen. Psychol.*, 1939, 21, 277-306.—A number of studies concerning the different rates of learning of items in different positions in a series are reviewed. An apparatus for the presentation of nonsense syllables is described. 8 series of 12 nonsense syllables each were used. Recall of the series was required after each presentation of the material following the third presentation or, in part of the experiment, following the first presentation. Two kinds of presentation were used: (1) the S governed the rate of exposure; (2) the rate of exposure was automatic and constant. 14 subjects learned the

lists in 4 different orders. For both kinds of presentation and for both learning and relearning "the influence of primacy, recency, and hence of intermediacy was found to affect the order of learning equally." Comparison of learning efficiency by the two kinds of presentation as indicated by several measures of learning are made.—C. N. Cofer (Brown).

[See also abstracts 50, 68, 73, 76, 152, 255, 260, 358, 400, 549, 593.]

MOTOR AND GLANDULAR RESPONSES (incl. Emotion, Sleep)

250. Agduhr, E. Internal secretion and resistance to injurious factors. *Acta med. scand.*, 1939, 99, 387-404.—Mating of animals increases their resistance to injurious factors, and this may also apply to man, thus explaining the increased duration of life in married people.—(Biol. Abstr. XIII: 12929).

251. Åkesson, S. Orthostatische reaktionen. (Orthostatic reactions.) *Acta psychiat.*, Kbh., 1939, 14, 17-27.—The writer gives a review of the mechanics of blood circulation and then discusses the pathogenesis and symptomatology of pathological conditions, with special reference to circumstances under which the individual becomes unconscious. "In large gatherings of people, several individuals suffer from arterial orthostatic anemia. It is not unreasonable to assume that one such person becomes unconscious in the crowd and by the pressure of people around him is kept from falling down, actually dies standing, and that damage later found to his body has been produced post mortem." Bibliography.—M. L. Reymert (Mooseheart Laboratory for Child Research).

252. Bakken, J. Some remarks on the reflex of the carotid sinus. *Acta psychiat.*, Kbh., 1939, 14, 381-383.—Hering in 1924 published his work on the reflex mechanism of the carotid sinus. The department of neurology at the State Hospital in Oslo has been trying to find a simple test for the demonstration of a hypersensitive carotid sinus reflex on a material of 30 patients, with the result that "no definite conclusions can be drawn from the investigations concerning a specific carotid sinus reflex."—M. L. Reymert (Mooseheart Laboratory for Child Research).

253. Barker, R. G. Time required for 'real' and for hypothetical choices. *Psychol. Bull.*, 1939, 36, 627.—Abstract.

254. Day, R. Effect of sleep on insensible perspiration in infants and children. *Amer. J. Dis. Child.*, 1939, 58, 82-91.—This paper describes "the changes in the rate of loss of weight (insensible perspiration) which accompany sleep and also the parallel changes in rectal and cutaneous temperature."—F. W. Finger (Brown).

255. Fick, R. Inwieweit ist die Frage der "Vererbung erworbener Eigenschaften" entschieden? (To what extent is the problem of the "inheritance of required characters" decided?) *Forsch. Fortschr.*

disch. Wiss., 1939, 15, 163-164.—P. L. Krieger (Leipzig).

256. Fontes, V. *L'étude cinématographique du mouvement en médico-pédagogie.* (The motion-picture study of movement in medical pedagogy.) *Z. Kinderpsychiat.*, 1939, 6, 65-72.—A statement of the importance of the study of movement and of the value of motion pictures for this purpose.—D. Shakow (Worcester State Hospital).

257. Freeman, G. L., & Giffin, L. L. *The measurement of general reactivity under basal conditions.* *J. gen. Psychol.*, 1939, 21, 63-72.—Two measures of general bodily reactivity, oxygen consumption and palmar skin resistance, were simultaneously recorded from 50 adult males under standard and stimulation conditions. Scores for both measures showed distributions skewed in the same direction. Palmar resistance changes were more reliable than metabolic measures. Low correlation coefficients between the two measures were obtained, but a connection is suggested "between a low rate of oxygen consumption and a high palmar skin resistance." Temperature and humidity changes had slight effects on resistance measures. Oxygen consumption "is relatively insensitive to stimulation effects superposed on the basal state."—C. N. Cofer (Brown).

258. Gaddum, J. H., & Kwiatkowski, —. *Properties of the substance liberated by adrenergic nerves in the rabbit's ear.* *J. Physiol.*, 1939, 96, 385-391.—The evidence that the substance liberated by adrenergic nerves is adrenaline is strengthened by the observation that it stimulates the frog's heart and constricts the vessels of the rabbit's ear, and that estimates of the adrenaline equivalent obtained by these two tests agree with colorimetric estimates.—M. E. Morse (Baltimore).

259. Garrison, K. C. *Problems related to left-handedness.* *Peabody J. Educ.*, 1938, 15, 325-332.—Several studies are cited which indicate the biological basis of handedness, the relation of eyedness to handedness, the relation of stuttering to reversal of handedness, and the relation of handedness to some other qualities.—N. B. Cuff (Eastern Kentucky).

260. Gilliland, A. R., & Nelson, D. *The effects of coffee on certain mental and physiological functions.* *J. gen. Psychol.*, 1939, 21, 339-348.—In this study suggestion effects were controlled by using Sanka, a non-caffeinated beverage, half of the time and coffee half of the time. More careful measurements of mental and motor functions and statistical treatment of the results were utilized than in previous studies on the effects of caffeine. 5 college students served as subjects. Under the controlled conditions of the experiment it was found that coffee decreased the pulse rate from 5 to 10%, the rate of tapping from 10 to 15%, and auditory reaction time from 0.5 to 1%. Both systolic and diastolic blood pressures were increased. Increased memory span for digits backward and increased rate of adding resulted from ingestion of coffee, and coffee decreased steadiness by as much as 10 to 15%. No effect of coffee was apparent on strength of grip and body temperature.

Only pulse rate was greatly affected in the first half hour following the drinking of coffee. Two cups had more effect than one cup, but the effect was not doubled.—C. N. Cofer (Brown).

261. Hallpike, C. S. *Some recent work on intralabyrinthine pressure.* *Acta oto-laryng., Stockh.*, 1939, 27, 229-244.—This is a study of the histologic changes in the temporal bones of 2 patients, a man of 63 and one of 28, who had suffered from Menière's syndrome and notably from vertigo, tinnitus, and nerve deafness. The anatomic changes observed in the affected temporal bones are summarized as follows: "In both there was a gross dilatation of the endolymph system, with obliteration of the perilymph spaces. Degeneration of Corti's organ was present in both cases. In the second case degeneration was also present of the sensory epithelium of the vestibule and of the stria vascularis, and finally degeneration and rupture had occurred in the membranous wall of the anterior vertical canal." On the basis of the changes "it seems possible to explain the attacks [of vertigo, etc.] as being due to sudden attacks of asphyxia of the labyrinthine end organs, brought about by extremely rapid rises of fluid pressure in response to volume increases in the endolymph which are relatively very small. But before this can happen there must have been brought about a dilatation of the endolymph system within the labyrinth to the limits of its bony walls." The article is abundantly illustrated with microphotographs.—E. M. Pilpel (New York City).

262. Huizinga, E. *Über die Ausfallerscheinungen nach einseitiger Labyrinthextirpation bei der Taube.* (The deficiency phenomena appearing after unilateral extirpation of a labyrinth in the pigeon.) *Acta oto-laryng., Stockh.*, 1939, 27, 377-385.—In pigeons the rotation of the head after unilateral extirpation of the labyrinth occurs after 6½ days (according to Ewald after 14 days). After the removal of Scarpa's ganglion the time interval was nearly 5 days. In connection with operations on the central nervous system the turning of the head appears much more promptly. When the following procedure was used, the rotation began in 3 pigeons 12 hours after operations on the labyrinth. One of the labyrinths was mutilated by opening the membranous ampullae. After full compensation (R=L) the other labyrinth was removed (after several months). The phenomena were then much more pronounced than normally. This fact must be due to central changes. In one pigeon rolling movements appeared. These movements were further analyzed by means of a film. The most important point is the pronounced head turning, in which the head fails to come to rest anywhere.—E. M. Pilpel (New York City).

263. Magnussen, G. *Vasomotorische Veränderungen in den Extremitäten im Verhältnis zu Schlaf und Schlafbereitschaft.* (Vasomotor changes in the extremities and their relation to sleep and readiness for sleep.) *Acta psychiat., Kbh.*, 1939, 14, 39-54.—In investigations on the relationship of peripheral vasomotor changes to sleep in 27 women patients,

involving 60 measurements within each 24-hour period on more than 100 sleep periods, a main result was increase in foot temperature as an indication of the approach of sleep. Thermo-electric measurements were taken on a specially constructed apparatus (pictured and briefly explained in the text). It is possible by this device to register auto-photographically the temperature of each foot, as well as rectal and room temperatures, on four patients at a time; each temperature was taken every half hour, giving 624 separate registrations in each 24-hour period. Graphs in text. Bibliography.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

264. **Manter, J. T.** The dynamics of quadrupedal walking. *J. exp. Biol.*, 1938, 15, 522-539.—This paper reports an experimental study of the walking of the cat, chosen as a representative quadruped. Moving pictures, taken of the animal walking over a platform specially constructed to record the pressure exerted by each foot during the stride, recorded the position of the various parts of the body at successive moments. The resulting combined records are analyzed and discussed in terms of displacement, velocity, and acceleration of the center of gravity of the body as a whole, and of its parts. 13 references.—*C. K. Trueblood* (Harvard).

265. **Marx, L. N., & Wagner, I. F.** Electrical accompaniments of sleep stages in the neonate. *Psychol. Bull.*, 1939, 36, 628.—Abstract.

266. **Meier, F. W.** The schema of levels in progression. *Psychol. Bull.*, 1939, 36, 603.—Abstract.

267. **Mikesell, W. H., & Palmer, M.** A laterality experiment. *Psychol. Bull.*, 1939, 36, 636.—Abstract.

268. **Monrad-Krohn, G. H.** Inversion of the abdominal reflexes of peripheral origin. *Acta psychiat., Kbh.*, 1939, 14, 281-284.—The writer has in many previous publications shown that qualitative as well as quantitative alterations of the abdominal reflexes may occur, and here gives a detailed history of a case of sequelae poliomyelitis which more fully illustrates this.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

269. **Newbery, H.** Three types of fetal activity. *Psychol. Bull.*, 1939, 36, 627.—Abstract.

270. **Nyssen, R., & Busschaert, R.** Proefondervindelijke vaststellingen betreffende de beteekenis van het plethysmographisch niveau. (Experimental observations on the plethysmographic curve.) *J. belge Neurol. Psychiat.*, 1939, 39, 473-482.—It was found that psychic stimulation which produces plethysmographic changes nearly always also produces involuntary movements and changes in the muscle tone of the respective extremity. Whenever similar movements were executed voluntarily by the subject the same changes in the plethysmographic curve and in the pulse amplitude were produced. The influence of motor reactions must therefore be kept in mind when interpreting plethysmograms, and the authors believe that this method is not a

reliable psychophysiological test without simultaneous myographic control.—*H. Syz* (Cornell).

271. **Parker, G. H.** Color changes in lizards, particularly in *Phrynosoma*. *J. exp. Biol.*, 1938, 15, 48-72.—*C. K. Trueblood* (Harvard).

272. **Philip, B. R.** Studies in high speed continuous work. II. Decrement. *J. exp. Psychol.*, 1939, 25, 307-315.—Analyses and curve fittings were made of data obtained from subjects who had performed high speed continuous work (tapping). "Since the hyperbola fits the data . . . and in addition enables us to predict the course of the work beyond the data from which the curves were computed, it is suggested that this mathematical form is the more satisfactory one to use as an expression of the trend of continuous work."—*H. W. Karn* (Pittsburgh).

273. **Philip, B. R.** Studies in high speed continuous work. III. Initial spurt and warming up. *J. exp. Psychol.*, 1939, 25, 402-413.—Two experiments on high speed continuous work (tapping), previously studied for periodicity (*J. exp. Psychol.*, 1939, 24, 499-510) and decrement (*J. exp. Psychol.*, 1939, 25, 307-315), afford data for the present analysis, which involves a comparison of the initial spurt and warming up effects.—*H. W. Karn* (Pittsburgh).

274. **Pollak, F.** Zur Pathologie und Klinik der Orientierung. (Orientation from the pathological and clinical points of view.) *Schweiz. Arch. Neurol. Psychiat.*, 1938, 42, No. 1.—The author analyzes the meaning of orientation as related to its constitutional elements: the meaning of right and left, the median line and somatic symmetry, the concept of the inner schema of the body, the projection of this schema into space, and the meaning of a preconceived kinetic aptitude. Besides temporo-occipital regulation of orientation (vision) and vestibulo-labyrinthine regulation, the author discusses a frontal regulation, which, from the phylogenetic point of view, is a more recent form, characteristic of the higher species which have developed frontal convolutions. This form, which is essential for our intellectual and spiritual life, allows the individual to master space and enter into other relationships with the outside world, such as are found in language and art. The author reports cases of partial agnosia of spatial relationships in connection with affections of the frontal lobe.—*M. Hareven* (Le Landern).

275. **Rejtö, A.** Die Rolle der Perilymphe in der Entstehung des kalorischen Nystagmus. (The role of the perilymph in the origin of caloric nystagmus.) *Acta oto-laryng., Stockh.*, 1939, 27, 270-280.—The article analyzes the physical processes taking place in connection with the appearance of nystagmus under caloric stimulation of the labyrinth. The author repeated the animal experiments performed in this connection by Lorente de Nó; he is unable to share the assumption of de Nó that "the movement of the perilymph constitutes the same kind of a stimulus to the labyrinth that the movement of the endolymph does." He finds in the

literature several statements confirming his idea that "the movement of the perilymph, by its pressure on the membranous ampulla, furthers or even induces the movement of the endolymph, the direct stimulus to the cupula. . . . The question to what extent the current of the perilymph acts upon the endolymph and how its action is to be evaluated quantitatively can be answered only by the physicists, and they will not be able to answer it until we have supplied them with all the necessary data. We hope soon to be in a position to do this."—*E. M. Pilpel* (New York City).

276. **Samuels, M. R.** *Judgment of faces.* *Character & Pers.*, 1939, 8, 18-27.—This study is a verification and extension of the method (described in detail) used by Brunswick and Reiter (see XIII: 2434), for determining the properties of facial patterns which form a basis for psychodiagnostic judgments. These experimenters used schematized faces in which the patterns were systematically varied. The present study confirms their findings to the effect that valid differences in patterns do exist and extends the method by substituting real photographs for the schematic faces. Several references are cited.—*M. O. Wilson* (Oklahoma).

277. **Skard, Å. G.** *Needs and need-energy.* *Character & Pers.*, 1939, 8, 28-41.—Among the schools of psychology there are two lines of thought, reflex psychology and dynamic or need psychology. Experiments reveal that for different needs and for different animals (in terms of dynamic psychology) there are parallel laws. It is assumed that these laws apply alike to animals and humans. The most important of these follow: (1) energy is stored when a need is not satisfied; (2) the stronger the need the less particular one is as to satisfiers; (3) when a need is satisfied, the person is satisfied; (4) social factors have a stimulating effect upon need-energy; (5) if strong needs remain unsatisfied, others tend to be neglected also; (6) needs may replace each other; and (7) needs may oppose or interfere with each other. Needs are further discussed in relation to transformation of need-energy (substitution and repression), emotions, experience and reality (projection, identification, etc.), and memory.—*M. O. Wilson* (Oklahoma).

278. **Soeken, G.** *Über die psychomotorische Reaktionsfähigkeit unserer Muskulatur.* (The psychomotor reactive capacity of our musculature.) *Forsch. Fortschr. dtsh. Wiss.*, 1938, 14, 371-372.—The subject's psychic readiness to undergo examination suffices to send, unconsciously, the appropriate impulse to the receptive musculature. This is a purposive psychic influence of the most delicate kind on the musculature.—*P. L. Krieger* (Leipzig).

279. **Volz, P.** *Droh- und Warnsignale bei zehnfüssigen Krebsen.* (Threatening and warning signals in decapod crabs.) *Forsch. Fortschr. dtsh. Wiss.*, 1938, 14, 284-286.—*P. L. Krieger* (Leipzig).

[See also abstracts 41, 76, 79, 81, 84, 86, 94, 99, 100, 103, 181, 186, 194, 200, 223, 364, 389, 403, 481, 510, 511, 528, 595, 630.]

PSYCHOANALYSIS, DREAMS, HYPNOSIS

280. **Bernard, T.** *Heaven lies within us.* New York: Scribner, 1939. Pp. 340. \$2.75.—In this explanation of the principles and various practices of Yoga, the author describes his own personal experiences in attaining health and happiness through Yoga.—(Courtesy *Publ. Weekly*).

281. **Bonaparte, M.** *The range of Freud's work.* *Rev. franç. Psychanal.*, 1936, 9, No. 4.—A brief general outline of Freudian principles is given, and some objections to psychoanalysis are met.—*C. N. Cofer* (Brown).

282. **Brunswick, R. M.** [Supplement to the "History of an Infantile Neurosis" of Freud.] *Rev. franç. Psychanal.*, 1936, 9, No. 4.—This is a paper on a later analysis of a patient whom Freud had analyzed previously and reported on in the "History of an Infantile Neurosis."—*C. N. Cofer* (Brown).

283. **Bullard, D. M.** *The application of psychoanalytic psychiatry to the psychoses.* *Psychoanal. Rev.*, 1939, 26, 526-534.—"Psychoanalytic psychiatry," an interpretative psychiatry based on the work of the Freudians, is contrasted with non-psychoanalytic or descriptive psychiatry. The psychoanalytic psychiatrist is more cognizant of his relationship to the patient and of its importance in therapy than is the non-psychoanalytic psychiatrist. Examples of the differences in the two approaches are given.—*C. N. Cofer* (Brown).

284. **Carington, W.** *The quantitative study of trance personalities. New series, I: Revision and extension of the inter-medium experiment.* *Proc. Soc. psych. Res., Lond.*, 1939, 45, 223-251.—"To the material derived from Mrs. Leonard and Mrs. Sharplin, and dealt with in Q. S. T. P. III, further data from Mrs. Garrett have been added. Treatment of the whole material by the same general method as before, but avoiding certain pitfalls, shows that there is a significant relationship between the J and E reactions obtained from the different mediums. This is chiefly shown by a negative correlation between the values (J-E) obtained from Sharplin and Garrett, increasing from occasion to occasion. Further investigation shows that the magnitude of this correlation is not independent of the mediums' own reaction times; this supports the hypothesis of Interference, rather than of Interchange, as an explanation of the negative effect found. Collateral evidence is also discussed, and indicates that the true anti-chance odds are considerably greater than the 49 to 1 actually evaluated. The operation of some kind of external factor or influence is strongly suggested. This does not 'prove' the autonomy of the 'communicators,' but constitutes supporting evidence in its favor as compared with the implications of a null result."—*J. G. Pratt* (Duke).

285. **Fairbairn, W. R. D.** *Is aggression an irreducible factor?* *Brit. J. med. Psychol.*, 1939, 18, 163-170.—Primary aggression is said to represent a fundamental and inborn instinctive tendency in human nature.—*E. R. Hilgard* (Stanford).

286. Forsyth, D. The case of a middle-aged embezzler. *Brit. J. med. Psychol.*, 1939, 18, 141-153.—A case classified technically as one of amnesia as a result of dissociated personality was studied first by analytical technique and then by hypnosis. The memories were restored through hypnosis, and the symptoms of psychoneurosis were alleviated. The advantage of combining analysis and hypnosis is indicated.—E. R. Hilgard (Stanford).
287. Grinker, R. R. A comparison of psychological "repression" and neurological "inhibition." *J. nerv. ment. Dis.*, 1939, 89, 765-781.—The author discusses the psychoanalytic concept of repression and the neurological concept of inhibition. He postulates that the two are dynamically identical, showing two dynamic factors: (1) the abandonment of a figurative level of activity (negative aspect), and (2) the adoption of a new level of activity (positive aspect) which may be "upward" in phylogenesis and ontogenesis, "downward" in disease, and in any direction in learning.—R. C. Moore (Boston Psychopathic Hospital).
288. Hertzman, M. The merging procedure in experiments on extra-sensory perception. *J. gen. Psychol.*, 1939, 21, 261-269.—Rhine has concluded that results of subjects who do not score above chance in card guessing cannot be considered as evidence against the existence of ESP. Hence, "only from the analysis of individual data" can evidence for ESP be obtained. Yet in Rhine's work "there are many instances where the data of many individuals have been merged with resultant critical ratios that are spuriously enhanced." Several experiments are cited which show "that tremendously significant ratios may be obtained from merged data where only a minority of the subjects have significant deviations in their own right." Equations are set up to predict the average number of hits necessary for different numbers of trials and degrees of significance. Merging and special selection effects are demonstrated with these equations. Further experimentation on the few subjects who make high scores in a large number of trials is necessary.—C. N. Cofer (Brown).
289. Hopkins, P. Analytic observations on the *Scala Perfectionis* of the mystics. *Brit. J. med. Psychol.*, 1939, 18, 198-218.—The graded path or ladder to the achievement of holiness, as described by Buddha, Patanjali, and others, is interpreted psychoanalytically. "Among many psychoanalytic mechanisms motivating those who endeavor to mount the *scala perfectionis*, the sublimation of oral and anal erotism, auto-sadism, homosexuality, and guilt over the Oedipus complex are prominent."—E. R. Hilgard (Stanford).
290. Inman, W. S. The symbolic significance of glass and its relation to diseases of the eye. *Brit. J. med. Psychol.*, 1939, 18, 122-140.—On the basis of several cases, the formula is developed that glass = hymen.—E. R. Hilgard (Stanford).
291. Kennedy, J. L. Changes in attitude toward "telepathy" and "clairvoyance" during a 25-year period. *Psychol. Bull.*, 1939, 36, 649-650.—Abstract.
292. Lincoln, J. S. The dream in primitive cultures. Baltimore: Williams & Wilkins, 1938. Pp. xiii+359. \$4.00.—See X: 4162.
293. Mare, W. de la. Behold, this dreamer! Of reverie, night, sleep, dream, love-dreams, nightmare, death, the unconscious, the imagination, divination, the artist, and kindred subjects. New York: Knopf, 1939. Pp. viii+694. \$4.50.
294. Masserman, J. H., & Balken, E. R. The psychoanalytic and psychiatric significance of phantasy. *Psychoanal. Rev.*, 1939, 26, 535-549.—This is the second of two reports concerning phantasies obtained from 50 patients with mild neuroses and psychoses. This material was interpreted in relation to anamnestic and clinical study of each patient. The phantasies revealed unconscious determinants of the patients' difficulties and provided frequently "an index of the status of the patient's transference, his reaction to the therapeutic situation, and the depth or superficiality of his subsequent emotional reintegrations." Complicating factors invalidate these interpretations in some cases. Phantasies sometimes reveal anamnestic and salient clinical data. In two appendices are given the description of the pictures in the Morgan-Murray series and some possible modifications of the Morgan-Murray phantasy test.—C. N. Cofer (Brown).
295. Mauco, G. [The psychology of the child in its relations with the psychology of the unconscious.] *Rev. franç. Psychanal.*, 1936, 9, No. 4.—Similarities between thought in the child and thought in the unconscious are noted. Both kinds show absolute egocentrism; immediate desire must be satisfied. Childish thought proceeds by schemas, unconscious thought by symbols. Several other traits result in "absolute subjectivity of reality" in the kinds of thought. From comparing Piaget and Freud, Mauco decides "that an undeniable relationship seems to unite the unconscious with infantile psychology." Stages in the child's emotional and intellectual development are listed.—C. N. Cofer (Brown).
296. Pichon, E. [From Freud to Dalbiez.] *Rev. franç. Psychanal.*, 1936, 9, No. 4.—This is a review of a book, "La Methode Psychoanalytique et la Doctrine Freudienne," by Roland Dalbiez.—C. N. Cofer (Brown).
297. Pickford, R. W. Some interpretations of a painting called 'Abstraction.' *Brit. J. med. Psychol.*, 1939, 18, 219-249.—An analysis of a picture painted impulsively by a male student in his early twenties, not trained as an artist. The painting was done in a fit of anger during a period of overwork. The interpretation, aided by notes written and dictated by the artist, shows how aggression was expressed chiefly through attacks on fantasies symbolized by the cardboard and objects drawn, and upon various distasteful ideas symbolized in the painting. The therapeutic value of the painting is recognized.—E. R. Hilgard (Stanford).

298. Potter, C. F. *Beyond the senses*. New York: Doubleday, 1939. Pp. 284. \$2.50.—"A Unitarian minister states his reasons for now believing positively that telepathy is a scientific fact, when for many years he refused to believe in it."—(Courtesy *Publishers' Weekly*).

299. Pratt, J. G. A further advance in methods of investigating extra-sensory perception. *Psychol. Bull.*, 1939, 36, 621.—Abstract.

300. Reich, J. P. A case of psychoanalytic self-observation. *Psychoanal. Rev.*, 1939, 26, 470-484.—A description and interpretation from the psychological standpoint of the life of St. Teresa of Jesus.—C. N. Cofer (Brown).

301. Remmers, H. H. Waking suggestibility in children—general or specific? *Psychol. Bull.*, 1939, 36, 630.—Abstract.

302. Rogosin, H. An evaluation of extra-sensory perception. *J. gen. Psychol.*, 1939, 21, 203-217.—Historical, philosophical, mathematical, methodological, social, and cultural aspects of research on ESP are discussed. Reasons for acceptance of ESP have been (1) its university sponsorship, (2) its support from science editors of influential newspapers, and (3) a tendency in present-day culture to "return to mysticism." A bibliography of 132 titles is included.—C. N. Cofer (Brown).

303. Schlumberger, M. On the cure of a case of impotence. *Rev. franç. Psychanal.*, 1936, 9, No. 4.—A case report of the successful psychoanalytic treatment of an impotent male is presented.—C. N. Cofer (Brown).

304. Squires, P. C. A case of female narcissism with anal components. *Psychoanal. Rev.*, 1939, 26, 461-469.—This is a presentation of a case exhibiting extreme narcissism. Psychoanalytic interpretations are made.—C. N. Cofer (Brown).

305. Stephen, K. Aggression in early childhood. *Brit. J. med. Psychol.*, 1939, 18, 178-190.—Aggression may be changed from a valuable to a dangerous impulse as a result of too severe anxiety in early life.—E. R. Hilgard (Stanford).

306. Symons, N. J. On the conception of a dread of the strength of the instincts. *Brit. J. med. Psychol.*, 1939, 18, 154-162.—An elaboration of Anna Freud's "instinctual anxiety." Anxiety of this type is regarded as being of essentially schizophrenic order, and its origins are referred to early oral privations.—E. R. Hilgard (Stanford).

307. Thomas, C. D. A proxy experiment of significant success. *Proc. Soc. psych. Res., Lond.*, 1939, 45, 257-306.—A report upon mediumistic material purporting to deal with a deceased person with whom both the experimenter (sitter) and medium were unacquainted.—J. G. Pratt (Duke).

308. Thouless, R. H. Report on Glasgow repetition of Dr. Rhine's experiments on extra-sensory perception. *Proc. Soc. psych. Res., Lond.*, 1939, 45, 252-256.—6650 trials with ESP cards, using 15 subjects, are reported and analyzed by the chi-square and deviation-ratio methods and for the frequency

of strings of successive hits within the run. No evidence of a factor tending to produce extra-chance results is found. "That my failure to reproduce Dr. Rhine's result may have been due to failure to reproduce his conditions, I am, of course, willing to admit. The necessity for certain conditions not reproducible by a conscientious and experienced experimenter is, however, a factor interfering with repeatability of the experiment. If ESP is a genuine phenomenon, it is to be hoped that investigators of it will so standardize the conditions that the results can be repeated in any laboratory."—J. G. Pratt (Duke).

309. Uphoff, H. F. The relation between belief and errors in ESP recording. *Psychol. Bull.*, 1939, 36, 640-641.—Abstract.

310. Want, R. L. The castration motive in a dream. *Aust. J. Psychol. Phil.*, 1939, 17, 144-150.—Report of one of the author's dreams, demonstrating the logic of the castration complex in its structure.—H. D. Spoerl (American International College).

311. Wolters, A. W. Aggression. *Brit. J. med. Psychol.*, 1939, 18, 171-177.—Retreat and attack refer to normal modes of conduct which are often adaptive; destructiveness and aggression refer to exaggerations or perversions of a normal biological pattern, whether due to ego-controlled activity (dominance over others sought for its own sake) or to fear.—E. R. Hilgard (Stanford).

[See also abstracts 13, 171, 448.]

FUNCTIONAL DISORDERS

312. Boome, E. J., & Richardson, M. A. *Relaxation in everyday life*. London: Methuen, 1938. Pp. viii+131. 5 s.

313. Buchholz, F. *Das brauchbare Hilfsschulkind, ein Normalkind*. (The useful special-school child, a normal child.) Weimar: Böhlau, 1939. Pp. iv+186. RM. 5.80; RM. 7.

314. Bürger-Prinz, H. *Gedanken zum Problem der Homosexualität*. (Thoughts on the problem of homosexuality.) *M Schr. Krim Biol.*, 1939, 30, 430-438.—Homosexuality has no relation to criminality in other fields or to definite physical types, although it occurs more often among dysplastic and frail persons. The feeble-minded are more exposed to seduction than the normal, but are less capable of extending their field than are more differentiated natures. The homosexual is sexually alone; his role is only that of consummation or passivity. The focus is his own pleasure—hence an extension of masturbation. Homosexuality remains within the sphere of one's body and, unlike heterosexuality, does not demand a personal stake. Intimacy with one's own sex is a special danger for adolescents.—P. L. Krieger (Leipzig).

315. Cammack, J. S. *Moral problems of mental defect*. New York: Benziger, 1939. Pp. 211. \$2.25.

316. Compere, E. L. *The mental hygiene aspect of the care of the orthopedic patient*. *Occup. Ther.*,

1939, 18, 31-35.—Special attention is given to the attitude of the home, such as whether the patient has been too much protected or neglected.—*H. E. Burt* (Ohio State).

317. Davidson, G. M. The involutinal (mental) syndrome. *Psychiat. Quart.*, 1939, 13, 42-82.—70 cases, belonging to three age groups and showing a typical affectivity, were compared and the involutinal syndrome outlined. Considerable attention is paid to psychosomatic relationships. 17 cases are cited to illustrate.—*R. C. Moore* (Boston Psychopathic Hospital).

318. Dayton, N. A. Report of the division of mental deficiency. *A. R. Comm. ment. Dis., Mass.*, 1937. Pp. 40.—This is the report for the year ended November 30, 1937. It is sub-divided into 7 sections: Traveling psychiatric school clinics for the examination of retarded children in the public schools; Incidence of retardation; Central registry for mental defectives; Research in mental deficiency; Publications; Social service division; and Recommendations. The need is particularly stressed for special classes in the public schools, and community supervision of retarded and deficient minors.—*F. W. Finger* (Brown).

319. Dietrich, W. Die Bedeutung der Psychologie in der forensischen Praxis. (The meaning of psychology in medicolegal practice.) *M Schr. Krim-Biol.*, 1939, 30, 315-319.—Modern medicolegal psychology has adopted a new attitude toward jurisprudence. It no longer interferes with the law, but, using the means at its command and realizing its limitations, merely helps to clear up the psychological situations of medicolegal practice. Its chief task lies in the hitherto insufficient psychological education of law students.—*P. L. Krieger* (Leipzig).

320. Doll, E. A. Preparation for clinical psychology. *J. consult. Psychol.*, 1939, 3, 137-140.—"A good clinician requires broad outlook, specific knowledge, general culture, worldly wisdom." More than psychometric determinations are required. Conventionalized methods of anamnesis, measurement, observation, and report are employed in clinical psychology. The following fields of special relationship as scope for a clinician are discussed: public schools and institutions, clinics, employment, and public welfare. Portrait of author.—*P. S. de Q. Cabot* (Simmons).

321. Elkind, H. B. Are mental diseases on the increase? The problem of determination. *Psychiat. Quart.*, 1939, 13, 165-172.—Data now available are not in forms yielding an adequate answer to the problem. Suggestions for gathering adequate statistics are offered. The opinion is given that mental diseases in general are not on the increase, though possibly those accompanying old age may show a slight increase in incidence.—*R. C. Moore* (Boston Psychopathic Hospital).

322. Fingert, H. H., Kagan, J. R., & Schilder, P. The Goodenough test in insulin and metrazol treatment of schizophrenia. *J. gen. Psychol.*, 1939,

21, 349-365.—Goodenough drawings were obtained from a group of untreated schizophrenics and from schizophrenics recovering from insulin and metrazol treatments. Samples of the drawings secured at successive intervals during recovery from several patients are presented. Characteristics of schizophrenic drawings are: (1) incompleteness and distortion, (2) disproportion between parts of the body, (3) stereotypy, (4) disruptive addition of primitive form elements, (5) perseveration. The drawings in the period of recovery from treatment show a variety of characteristics. There are "decided signs of organic confusion in gestalt perception and representation." When organic confusion subsides, the "schizophrenic integration soon gets the upper hand." Insulin and metrazol therapy attacks not the schizophrenic structures but deeper seated ones, the changes in which may be reflected in the reorganization of the schizophrenic process.—*C. N. Cofer* (Brown).

323. Fortanier, A. H. Considérations psychologiques sur les traitements avec l'insuline et le cardiazol. (Psychological considerations on the treatment with insulin and cardiazol.) *J. belge Neurol. Psychiat.*, 1939, 39, 483-491.—The author discusses the effects of the treatment of schizophrenia with insulin and cardiazol, and expresses the view that psychological factors are of great importance in these forms of treatment. The administration of these drugs produces effects, such as a feeling of weakness, dependence on the environment, and anxiety, which impel the patient to attempt adjusting himself to reality in a normal way. These reactive psychotic phases in the course of each treatment are thus often an important aid in the patient's readjustment.—*H. Syz* (Cornell).

324. Frederics, D. Diana; a strange autobiography. New York: Dial Press, 1939. Pp. 294. \$3.50.—"The life story of a Lesbian who tried to lead a normal life."—(Courtesy *Publishers' Weekly*).

325. Friedman, J. H. The attitude of the psychoneurotic toward scientific contraceptive advice. *J. nerv. ment. Dis.*, 1939, 89, 672-681.—The records for 30 psychoneurotics who received scientific contraceptive advice were studied. 14 refused to employ the approved contraception. 9 discontinued it for various reasons. Of the entire group of 30, only one patient can be said to have benefited by the scientific contraception. The author concludes that where anxiety and other neurotic symptoms exist, they are part of a more deeply seated conflict in sexuality as a whole. Without preparation through a careful approach to the topic and consideration of all such factors as the sociological, religious, and psychological that are involved, the patients are likely to evade application of the advice given them. A plea is made for further information on the subject.—*R. C. Moore* (Boston Psychopathic Hospital).

326. Green, I. An approach to the problem of the neuroses. *Med. Rec., N. Y.*, 1939, 150, 201-206.—The author presents a general review of the various psychological conceptions of the neuroses, and he emphasizes the essential need, if there is to be any

satisfactory understanding of the neuroses, of not only a psychological but also a biological and a physiological approach to the problem.—*M. H. Erickson* (Eloise Hospital).

327. **Harms, E.** *The psychotherapeutical importance of the arts.* *Occup. Ther.*, 1939, 18, 235-239.—Inasmuch as most mental diseases are unpleasant and art in general is pleasant, the latter should make some helpful therapeutic contribution to the former.—*H. E. Burr* (Ohio State).

328. **Hattingberg, H. v.** *Das Problem der Sucht.* (The problem of addiction.) *Zbl. ges. Neurol. Psychiat.*, 1939, 93, 711-712.—The essential aspect of addiction is neither long habituation nor an especially strong instinctive drive. Addicts fall into 3 groups: (1) The behavior is short-circuited but returns periodically, and is related to sex disturbances. The majority are elderly women, undisciplined, infantile, opinionated, and shut-in. (2) Young people, often problem children, who feel inferior; either with family fixations or in revolt against authority; often pedantically orderly. (3) Cases with a background of a pathological mental condition in the course of developmental crises. The mechanism is that of coupling of instincts, with short-circuiting, the reaction becoming the stimulus, avoidance a fascination, so that the opposite of the desired reaction occurs in spite of all ethical will power. Addiction develops, as a rule, only in certain personality types, especially the easily hypnotized. Not all are labile psychopaths; some are persons with marked ethical tension, in whom a great need for devotion and dependence is opposed by excessive self-control.—*P. L. Krieger* (Leipzig).

329. **Hayata, S.** [On aphasias.] *Taiwan med. J.*, 1938, 37, 1345-1363.—For two boys with aphasia, one 7 years old and the other 8, the detailed symptoms are arranged along with each diagnosis. After the statistical study of this disease, the author points out its varied causes and its preponderance in males, except those under 20 years of age.—*R. Kuroda* (Keijo).

330. **Hays, R. R.** *Folie à trois.* *Med. Rec., N. Y.*, 1939, 150, 210-212.—The author presents the case histories of a mother, diagnosed as suffering from paranoid condition, and her two sons, diagnosed as suffering respectively from dementia praecox and paranoid dementia praecox, and offers discussion of these cases as representing folie à trois.—*M. H. Erickson* (Eloise Hospital).

331. **Hutchinson, E. D.** *Varieties of insight in humans.* *Psychiatry*, 1939, 2, 323-332.—The author discusses the phenomenon termed "insight" or "creative insight," since it usually develops in relation to constructive work temporarily abandoned because of failures to solve the problem. It apparently constitutes a reorganization of the perceptual field; its development is marked by special emotions and it requires prompt and full consideration if it is to be retained. The author then cites and discusses examples from present-day writers and scientists and from history. In general

analysis of these experiences, the author finds that the essential pattern of behavior consists of 4 stages—a period of preparation, a period of recession, a period or moment of insight, and a period of verification, elaboration, or evaluation. He finds that the occasion for insight, of which he cites examples, is in the nature of two types of accident: (1) in which the accidental event is consciously related to and incorporated into the creative undertaking, and (2) the accident which is used merely as a catalytic agent. He then discusses the reasons for the development of the insight, relating it to the processes of insight development as revealed in the psychoanalytic situation.—*M. H. Erickson* (Eloise Hospital).

332. **James, M. L.** *Releasing curative values in the unconscious through the finger tips.* *Occup. Ther.*, 1939, 18, 253-260.—Satisfactory compensation sometimes results from sketching dream pictures or visual hallucinations or writing down the words of auditory hallucinations. Type of spontaneous drawings is sometimes a clue to the nature of the disorder.—*H. E. Burr* (Ohio State).

333. **Kielholz, A.** *Von den Quellen der Querulanz.* (On the origin of querulousness.) *Schweiz. Arch. Neurol. Psychiat.*, 1938, 42, No. 1.—The author examines the records of a case of querulousness which he himself had observed, together with a number of cases observed by other writers, pointing out the various shades of querulousness to be found. He begins with those forms which are secondary to such mental states as paranoia, senile dementia, alcoholism, and traumatic states, and ends with the primary form as found in psychopathic behavior. He tends to give a Freudian interpretation of the underlying psychology: infantile narcissistic regressions, suppressed homosexual tendencies, and incestuous complexes initiate the projection to the exterior, by means of a defense mechanism, of this imperative need of proving one's innocence and of presenting and interpreting an ideal image of oneself according to the endopsychic formula of the paranoid.—*M. Hareven* (Le Landeron).

334. **Klingbeil, G. M.** *The historical background of the modern speech clinic. Part 2. Aphasia.* *J. Speech Disorders*, 1939, 4, 267-284.—130 references in chronological order beginning with Thucydides. Brief comments on each author and his contribution to the problem of aphasia are given. An alphabetical index of authors is appended.—*C. V. Hudgins* (Clarke School).

335. **Kodama, S.** [War and mental diseases.] *Geibi Iji.*, 1938, No. 507, 199.—From observation of mental diseases during the Russo-Japanese and world wars, the author concluded as follows: There are no psychoses peculiar to war time. Any effect of war upon most dementia praecox, dementia paralytica, and manic-depressive psychosis is hardly found during peace time. No definite increase in exhaustion psychoses is seen; psychogenic and hysterical psychopathies are more than twice as numerous as in peace time, but differences of in-

crease are seen among nations. Though it is difficult to determine the medical characteristics of so-called war psychopaths (trench or shell shock) they really have hysterical symptoms. These mental diseases are often seen among white men at the front, but are very rare among Japanese soldiers. The fact that few Japanese hysterical psychopaths are seen in either war and peace times may perhaps be an outstanding characteristic of the Japanese.—*R. Kuroda* (Keijo).

336. **Köhn-Behrens, C.** *Du bist dein Schicksal. Gespräche mit führenden Vertretern der psychotherapeutische Wissenschaft.* (You are your fate. Talks with leading representatives of psychotherapeutic science.) Munich, Berlin: Lehmann, 1939. Pp. 159. RM. 2.40; 3.40.

337. **Kokan, Y.** *Taishû kyôfu no ichirei to sono seiritsu kiten no kaisetsu.* (A case of fear of body smell and the mechanism of its formation.) *Osaka Iji Shinshi*, 1939, 10, 638.—A case of obsession in which the patient was seized with fear of his own body smell is described on the basis of its formation and growth. The body smell itself was in general never regarded morbid or abnormal, but the patient could not get rid of it and came gradually to be greatly introverted. The reason why he did not become extraverted must be sought in the fact that he suffers from Morita's "nervous temperament," having a strong tendency to self-preservation and yet being devoid of sufficient courage to push forward unless from fear of failure.—*R. Kuroda* (Keijo).

338. **Lang, T.** *Ergebnisse neuer Untersuchungen zum Problem der Homosexualität.* (Results of new investigations on homosexuality.) *M Schr. Krim-Biol.*, 1939, 30, 401-413.—A certain percentage of homosexuals are transformed males, i.e. genetically females, or transformed females, i.e. genetically males. The proportions of the sexes among the children, and especially the half-siblings, of the subjects make this mechanism best explicable by the valence theory which Goldschmidt has worked out on butterflies. According to this, sex is determined not by the so-called sex chromosomes, but by the valences of the autosomes, or the potency quotients of the autosomes and sex chromosomes. With the combination of certain potencies—even in entirely normal sex determination—definite intersexual forms must occur. Homosexuality is only one, although a very extensive, special case of this. It is not a specific inherited characteristic. Marriage of a homosexual to a normal partner for curative purposes, and also the threat of punishment (sterilization) are to be rejected on eugenic grounds. The view that homosexuals are worthy of sympathy is perhaps, for the normal person, a better protection against corruption than punishment or threats. In countries where homosexuality has hitherto not been punishable it is not so widespread as in other lands.—*P. L. Krieger* (Leipzig).

339. **Lehrman, S. R.** *The psychotherapy of hospitalization.* *Psychiat. Quart.*, 1939, 13, 309-321.

—"Spontaneous remissions" are discussed from the point of view that factors in hospitalization itself are of therapeutic benefit in restoring adult ego values to the patient. Case material is given.—*R. C. Moore* (Boston Psychopathic Hospital).

340. **Lemere, F.** *A theory as to the physiopathology of the functional psychoses and neuroses.* *Med. Rec., N. Y.*, 1939, 150, 206-210.—The author presents a theory of the physiopathology of the functional psychoses and neuroses, attributing schizophrenia to underactivity of the diencephalon, manic-depressive reactions to overactivity, psychoneuroses to psychological conflicts, and autonomic neuroses to dysfunction of the diencephalon. He considers the effectiveness of insulin and metrazol therapy of schizophrenia as deriving from stimulation of the diencephalon, and feels that sedation is more effective in manic-depressive reactions. 5 brief case histories are given to illustrate theoretical and therapeutic considerations.—*M. H. Erickson* (Eloise Hospital).

341. **Levin, P. M.** *The syndrome of vestibular paralysis in man.* *J. nerv. ment. Dis.*, 1939, 89, 335-342.—The vestibular apparatus is the receptor organ for reflexes serving to right and maintain posture, and for compensatory eye positions. Animal experimentation has confirmed this. The author presents a case report where the same syndrome is exhibited in the development of a vestibular paralysis in the absence of obvious disease of the internal ear.—*R. C. Moore* (Boston Psychopathic Hospital).

342. **Malzberg, B.** *Literacy and mental disease.* *Psychiat. Quart.*, 1939, 13, 145-159.—Illiteracy is not related causally to the prevalence of mental disease, and may be related either to mental retardation or to conditions lowering standards of education. The socio-economic conditions responsible for illiteracy were also largely responsible for the prevalence of mental disorders.—*R. C. Moore* (Boston Psychopathic Hospital).

343. **Milici, P.** *Postemotive schizophrenia.* *Psychiat. Quart.*, 1939, 13, 278-293.—Psychic insult is not ordinarily uncovered in cases of dementia praecox until the personal complexes (areas of vulnerability) are disclosed, making the individual vulnerable to exaggerated reaction in response to emotional situations. The author believes that the majority of cases of dementia praecox are "postemotive," that there is an overwhelming affective situation which the individual cannot handle adequately because of constitutional weakness, and that the individual takes refuge in the flight processes of the disorder. 14 illustrative cases are cited.—*R. C. Moore* (Boston Psychopathic Hospital).

344. **Mohr, G.** *Mental hygiene aspects of occupational therapy.* *Occup. Ther.*, 1939, 18, 25-30.—The therapist must adapt his procedures to the individual patient after observing the latter's attitude, such as degree of discouragement or mere need of distraction.—*H. E. Burt* (Ohio State).

345. Mowrer, E. R. A study of personal disorganization. *Amer. sociol. Rev.*, 1939, 4, 475-487.—Insanity and suicide are viewed as being in many cases extremes of personal disorganization. This study relates them to social disorganization by tracing the changes in their incidence in the city of Chicago from 1929 to 1935. It is found that "the depression produces a decrease in insanity and an increase in suicide. In insanity, the decrease at the bottom of the business cycle is primarily that of those forms developing out of personal disorganization, such as dementia praecox, alcoholism, etc., the biophysicogenic types remaining fairly constant in rate. Since most forms of psycho-sociogenic insanity probably require some time for development out of personal disorganization, whereas suicide may develop more rapidly, this negative correlation between insanity and suicide does not necessarily mean that the depression has had opposite effects. There may be instead a lag between economic conditions and insanity." The data are also examined for relation to marital condition, sex, age, race, and area within the city.—I. L. Child (Harvard).

346. Murray, J. M., & Luidens, H. Insulin and metrazol therapy in identical twins. *Psychiat. Quart.*, 1939, 13, 114-122.—Of a pair of identical twins who developed psychoses, one received metrazol, the other insulin treatment. The courses of the psychoses and the results of treatment are compared.—R. C. Moore (Boston Psychopathic Hospital).

347. Myerson, A. Are mental diseases on the increase? Analysis of the contributions. *Psychiat. Quart.*, 1939, 13, 177-181.—Classifying the various mental disorders as those falling into an exogenous group (e.g. general paresis), the constitutional, hereditary diseases (e.g. dementia praecox, manic-depressive psychosis), and the diseases of the senium, the author finds increase in incidence only in the last group. Factors important in this increase are the increase in life span, accessibility of the hospitals, difficulty (or unwillingness) of care of old people in the home, with the increasing age of the population the most important.—R. C. Moore (Boston Psychopathic Hospital).

348. Nissen, A. Sjøkkbehandling av sinnssyke. (Shock treatment in mental disease.) *Tidsskr. norske Laegeforen.*, 1939, 59, 752-771.—The writer has used the treatment of Sakel and that of v. Meduna, and a combination of these two methods, in several cases of schizophrenia. He says that the prognosis of a case treated in this way is determined by three factors: (1) the duration of the illness, (2) the intensity of the treatment, and (3) conditions of the illness not yet known. The third factor can be studied only in a material carefully treated, and where the illness has been of short duration. The author himself does not have a material of such quality, but he demonstrates, in referring to some cases, the effect of the treatment.—M. L. Reymert (Mooseheart Laboratory for Child Research).

349. Ogata, S. [Hysterical aphasia brought about by a certain incentive.] *Shindan-Chiryō*,

1938, 25, 1699-1700.—A woman of 38 first became aphasic when she was struck on the breast by her husband a month after parturition, and thereafter she became aphasic whenever she was struck on the breast.—R. Kuroda (Keijo).

350. Parker, S., Schilder, P., & Wortis, H. A specific motility psychosis in Negro alcoholics. *J. nerv. ment. Dis.*, 1939, 90, 1-18.—The authors present a series of cases exhibiting a type of alcoholic encephalopathy evidently specific to Negroes. The psychosis is characterized by clouding of consciousness, hallucinations, mannerisms, and playfulness in the psychic sphere. In the motor sphere are seen rhythmic iteration, retropulsion, falling backward, rigidities, divergence of the arms, and turning about the longitudinal axis. The motility imitates the *Faxensyndrom* (irrelevant behavior) of schizophrenia. Only one similar case was observed in a white man.—R. C. Moore (Boston Psychopathic Hospital).

351. Patry, F. L. Psychiatric principles in educational methodology with special reference to epileptics. *J. except. Child.*, 1939, 6, 3-6.—The prime objective in the education of epileptics being education of the total personality, it is fundamental that there shall be employed the best principles of mental hygiene in their training, including wholesome acceptance of their handicap, conserving the emotional set-up, providing adequate medical and educational guidance, encouragement of hobbies and interests, promoting good physical habits and healthful emotional attitudes, preparing the child for satisfactory social adjustments, suiting of the task and the speed of the task to his abilities, the development of independence, and frequent and consistent counseling.—L. A. Averill (Worcester Teachers College).

352. Robbins, B. S. Neurotic disturbances in work. *Psychiatry*, 1939, 2, 333-342.—Neurotic disturbances in work behavior are symptomatic manifestations of total disturbances in the personality structure and in interpersonal relations. They serve both to enhance existing neurotic patterns and to give rise to new and destructive character trends. The author classifies these disturbances into those related to the goal or aim in work and those of function as shown in the difficulties encountered in the actual exercise of effort. Aim disturbances are then discussed as deriving from unrealistic ambitions, goals beyond the potentialities of the personality, and lack of ambition. Dysfunctions in work behavior are discussed in relation to incentives for work performance, misdirections and either partial or complete inhibition of effort, neurotic feelings and attitudes toward the work itself, and secondary characterological disturbances of personality resulting in substitute activities for work, such as cheating and stealing. Therapy of work disturbances necessitates attention to all the other aspects of the personality, since they cannot be treated as isolated phenomena.—M. H. Erickson (Eloise Hospital).

353. Rogers, C. R. Needed emphases in the training of clinical psychologists. *J. consult.*

Psychol., 1939, 3, 141-143.—The training of clinical psychologists is discussed according to the following emphases: selection, academic training, informal aspects, internship, and professional status. There is a general lack of a broad curriculum in academic preparation. Opportunity should be given for the psychologist to gain self-insight and to have experiences equipping him with a "definite and satisfying philosophy of living."—*P. S. de Q. Cabot* (Simmons).

354. **Róheim, G. Racial differences in the neuroses and psychoses.** *Psychiatry*, 1939, 2, 375-390.—The author reviews the problems of individual growth and development in terms of the cultural group to which the individual belongs, citing illustrative examples, especially from various primitive social groups. These he examines in relation both to one another and to various manifestations of mental disorder in an endeavor to determine the underlying motivations, the essential similarities, and cultural and racial differences. He concludes that race is not a determining factor in the variations of mental disorder, but rather that it is the type of system or culture, and the relationship of the individual to that culture, which significantly influence psychotic manifestations. Also he notes that inherent in the growth of civilization is an ever increasing tendency to tamper with personality development in innumerable ways and that, as a consequence, the cultural forces exercise an ever greater influence upon the individual as the scale of evolution rises. He summarizes his findings by stating that racial differences in neurosis and psychosis, described as different degrees of retardation, become manifest in the relations between the id, ego, and super-ego, and therefore in the type or degree of culture evolved by human groups. There is a footnote bibliography of 56 items.—*M. H. Erickson* (Eloise Hospital).

355. **Schauder, H. Zur Frage der therapeutischen Möglichkeiten der Musik bei Geisteskranken.** (The question of the therapeutic value of music in mental illness.) Stetten/Basel: Schahl, 1939. Pp. 22.

356. **Schilder, P. Notes on the psychology of metrazol treatment of schizophrenia.** *J. nerv. ment. Dis.*, 1939, 89, 133-144.—Within 30 seconds after the intravenous injection of metrazol the patient experiences an aura, with feelings of electricity and often optic phenomena. Confusion is deep, and the patient may feel he is about to be destroyed. A tonic and clonic fit follows the aura, with complete lack of consciousness. After the clonic phase, consciousness shows deep clouding, and a clumsily friendly attitude towards the physician is shown. Aphasic phenomena are shown after every fit, lasting a quarter to half an hour, and differing somewhat from the phenomena of epileptic dream states. Paraphasias and perseverations are common. Copying Gestalt figures shows features indicative of organic disturbance of the form function, in contrast to the type of disturbance usual in schizophrenia. Amnesia for the injection does not persist. Friendly attitudes toward others are strengthened after re-

peated convulsions, with better transference to the physician, persisting after the close of treatment. The gain of objective, but not dynamic, insight is typical for the recovered cases. The fit is interpreted as a fundamental threat to life, with recovery from the fit a psychological "rebirth"; previous fixations of the libido in more personal layers lose importance, and the patient shows renewed interest in those about him. The phenomenology of the insulin and metrazol seizures is similar, and the interpretation the same.—*R. C. Moore* (Boston Psychopathic Hospital).

357. **Schmid, E., & Schmid-Ganz, M. Beitrag zur Frage der psychischen epileptischen Äquivalente.** (A contribution to the question of psychic epileptic equivalents.) *Z. Kinderpsychiat.*, 1939, 6, 72-77.—Case report.—*D. Shakow* (Worcester State Hospital).

358. **Seidenfeld, M. A. Some psychometric observations on the tuberculous patients in a national institution: I. The Otis self-administering test of mental ability.** *J. gen. Psychol.*, 1939, 21, 447-455.—Higher form A of the Otis test was given to 42 tuberculous females and to 62 tuberculous males. The average age of the former was 29.5 years, range 17 to 46, and that of the latter was 31.8 years, range 20 to 56. The average highest grade reached for the entire group was the 11th. The occupations of the patients were varied. 47% of the subjects were Jewish. "The norms based upon the performance of our patients tend to be slightly higher than those reported by Otis for adults on the Higher forms. . . . There is a tendency for greater variance between the non-Jewish men and women than there is between Jewish men and women," though the two groups were essentially the same in intelligence rating. A Pearson r of $-.07 \pm .07$ was secured between "length of the present period of hospitalization and the Otis score." A relation may be indicated between degree of tuberculosis and Otis score. Erythrocyte count and hemoglobin content of the blood had no "demonstrable relation to the scores attained on the Otis test." A correlation of $.13 \pm .08$ was secured between vital capacity and Otis score.—*C. N. Cofer* (Brown).

359. **Smith, J. C. Psykiatriske forelæsnninger.** (Lectures on psychiatry.) Copenhagen: Ejnar Munksgaard, 1939. Pp. 310.—A textbook in the form of a lecture series. The subject matter is divided into three categories: the mentally diseased, the neurotic, and the mentally underdeveloped (oligophrenic). Great stress is laid upon tissue examinations and there are a number of very full case histories. Hereditary factors in schizophrenia, senile psychosis, and neurosis are discussed. Under oligophrenia there is a discussion of general intelligence and a caution as to the limitations of the findings of the intelligence testers, which findings are judged to be greatly overestimated. Mongols as a rule are only to a relatively small degree mentally deficient.—*N. J. Van Steenberg* (Iowa).

360. **Stengel, E. Studies on the psychopathology of compulsive wandering.** *Brit. J. med. Psychol.*,

1939, 18, 250-254.—There are three types of individuals tending toward pathological wandering: those subject to cyclic moods (especially depression), those who show signs of epilepsy, and a group with features of hysteria. Individual histories based on 22 cases reveal one characteristic feature: there has usually been a disturbed child-parent relation, so that relationship to one or both parents was either completely lacking or only partially developed.—*E. R. Hilgard* (Stanford).

361. Tatum, A. L. The present status of the barbiturate problem. *Physiol. Rev.*, 1939, 19, 472-572.—A review of the pharmacological, pathological, and psychological aspects. In regard to its psychiatric use to obtain temporary rapport with a patient, any depressant (e.g. alcohol) acts in a similar way in conditions of excessive inhibition. In prolonged depressions the barbiturates provide enforced mental rest, whereby the habit of psychotic activity may be broken through inactivity.—*M. E. Morse* (Baltimore).

362. Thierry, A. En snel genezen geval met conversieverschijnselen na psychisch trauma. (A case of quick recovery with conversion following psychic trauma.) *Maandschr. Kindergeneesk.*, Leiden, 1939, 8.—*D. Shakow* (Worcester State Hospital).

363. Uematsu, S. Seishin-bunretsu-byō no shuyō shōjō. (The chief symptoms of schizophrenia.) *Rinshō Igaku*, 1938, 1446-1450.—The author maintains that introverted autism, polyvalence, and the loss of individuality are three main symptoms of schizophrenia; it does not originate in the impediment of psychical elements, but in their disintegration. As bodily symptoms headache, insomnia, and perspiration in the early stages, as well as decrease of pupillary reflex, are mentioned.—*R. Kuroda* (Keijo).

364. Vértési, E. Handschrift und Eigenart der Krebsgefährdeten. (Handwriting and peculiarity of persons threatened by cancer.) Budapest: Tisza, 1939. Pp. 297. Sh. 15/—The purpose of the study reported in this book is to determine whether there are mental characteristics peculiar to cancerous diseases. The author examined approximately 400 handwriting specimens of patients who had died of cancer. The findings are stated hypothetically, since she recognizes that graphology is not an exact science. It is shown inconclusively that the personality of such patients can be studied by this means. The author is collaborating with Manninger of Budapest in founding an institute to make possible a collaborative study of cancerous patients by cancer specialists and graphologists.—*M. O. Wilson* (Oklahoma).

365. Volgyesi, F. Stage fright and neuroses in professions in general. *Med. Rec.*, N. Y., 1939, 150, 212-216.—A general discussion is given of stage fright and other professional neuroses as resulting from the tendency of the cultured person to overestimate intellectual considerations and to underestimate emotional significances.—*M. H. Erickson* (Eloise Hospital).

366. Waldenström, J. On anosognosia. *Acta psychiat.*, Kbh., 1939, 14, 215-220.—Several case histories of patients suffering from what Babinski in 1914 termed anosognosia, a lack of insight concerning the patient's diseased condition (partial lameness, for instance). It is suggested that a thorough clinical examination of cases with left-sided hemiplegia due to an embolic lesion would give much information when compared with findings of post-mortem examinations.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

367. White, B. V., Cobb, S., & Jones, C. M. Mucous colitis. *Psychosom. Med. Monogr.*, 1939, No. 1. Pp. v+103. \$2.00.—A report of an investigation of the symptoms and personality characteristics of hospital patients suffering from mucous colitis. Lesions were experimentally induced and observations made upon the rectosigmoid mucosa of a group of medical students. 16 case histories of patients are given and the role of emotional factors and a suggested therapeutic program discussed with reference to physical and mental hygiene and medication. The authors develop the thesis that "mucous colitis is a physiological disorder of the colon brought about through the action of the parasympathetic nervous system." Factors predisposing to the onset of mucous colitis are certain physiological and pathological states. Other important factors are anthropometric habitus, allergy, fatigue, presence or absence of infectious disease, and physical training. The commonest source of parasympathetic over-stimulation of the patients observed was emotional tension brought on by over-conscientiousness, sensitivity, and dependence upon the opinions of others, particularly whenever any threat to the ego was experienced. Anxiety, guilt, and particularly resentment characterized the tension, and the authors believe that tensional states of long duration "lead to chronic stimulation of the autonomic centers and in certain instances to the liberation of acetylcholine in the parasympathetic endings of the colon."—*P. S. de Q. Cabot* (Cambridge-Somerville Youth Study).

368. Wilson, A. T. M. Psychological observations on haematemesis. *Brit. J. med. Psychol.*, 1939, 18, 112-121.—The results of biographical examination of 50 patients with the symptom of haematemesis (vomiting of blood). Self-punishment mechanisms and infantile problems are common. Three fourths of the ulcer patients give a history of the onset of "stress dyspepsia" between the ages of 16 and 24, and this is the point at which psychotherapy should be begun.—*E. R. Hilgard* (Stanford).

369. Wohlfahrt, S. Ein amerikanisches System der psychischen Behandlung von Patienten auf internen Abteilungen. (An American system for psychiatric treatment of patients in wards for the internally diseased.) *Acta psychiat.*, Kbh., 1939, 14, 391.—Abstract.

370. Wohlfahrt, S. Psykiatriskt-neurologiska iakttagelser under en studieresa till Förenta Staterna. (Psychiatric-neurological observations dur-

ing a study trip to the United States.) *Soc.-med. Tidsskr.*, 1939, 16, 108-119; 127-135.—M. L. Reymer (Mooseheart Laboratory for Child Research).

371. Zillig, G. Über paragrammatische Störungen. (Paragrammatic disturbances.) *Allg. Z. Psychiat.*, 1939, 110, 21-47.—A 43-year-old man, wounded in the War, cannot express himself correctly either in speech or writing. He refers to himself as "the one." Understanding of speech is completely retained, and his behavior is normal. The lesion is possibly a tumor of the right temporal lobe.—P. L. Krieger (Leipzig).

[See also abstracts 67, 175, 283, 297, 376, 385, 415, 465, 469, 487, 488, 496, 527, 576.]

PERSONALITY AND CHARACTER

372. Barmack, J. E. A definition of boredom: a reply to Mr. Berman. *Amer. J. Psychol.*, 1939, 52, 467-471.—An answer to Berman's critique (*Amer. J. Psychol.*, 1939, 52, 297-299) of Barmack's work on boredom.—D. E. Johannsen (Skidmore).

373. Berman, A. Satiation or boredom? A rejoinder to Dr. Barmack. *Amer. J. Psychol.*, 1939, 52, 471-473.—A reply to Barmack's preceding article (pp. 467-471).—D. E. Johannsen (Skidmore).

374. Cook, P. H. The clinical testing of personality. *Aust. J. Psychol. Phil.*, 1939, 17, 151-157.—Brief discussion of the Bernreuter inventory and its critics, emphasizing its Adlerian one-sidedness.—H. D. Spoerl (American International College).

375. Edwards, L. E., & Robertson, M. L. The construction of a scale for the determination of the scientific attitude 'sensitive curiosity.' *Sci. Educ.*, 1939, 23, 198-206.—The authors present a scale with standardization data for the measurement of scientific attitudes.—(Courtesy *J. educ. Res.*).

376. Hamilton, D. M. Some aspects of homosexuality in relation to total personality development. *Psychiat. Quart.*, 1939, 13, 229-244.—Physical and psychological aspects of the bisexuality of man are brought out. The place of a homosexual stage in personality development is discussed, and the importance of homosexual conflict as a psychiatric problem noted. Three cases illustrate the tendency toward psychosexual maturity.—R. C. Moore (Boston Psychopathic Hospital).

377. Henry, L. K., & Emme, E. E. The home adjustment inventory: an attitude scale for personnel procedures. *Psychol. Bull.*, 1939, 36, 630.—Abstract.

378. Heyde, I. E. Charakter als Begriff. (The concept of character.) *Forsch. Fortschr. dtsch. Wiss.*, 1938, 14, 380-381.—"Character" means the individual soul in so far as, proceeding from the conditions of its ego consciousness of its primitive individual vital feeling, it is a valuable phenomenon for it.—P. L. Krieger (Leipzig).

379. Johnson, W. B. The social meaning of mood. *Psychol. Bull.*, 1939, 36, 646-647.—Abstract.

380. Ludwig, H. Rasse- und strukturpsychologische Untersuchungen zur Berufseignung. (Studies of race and structural psychology for vocational aptitude.) Düsseldorf: Nolte, 1938. Pp. 95. RM. 3.80.—In the Lower Rhine and Wupper districts Phalic-Nordics predominate, with, in some places, a stronger Westic strain. The integration types J₂, J₁/J₂ and S₂/S₁ predominate. In addition to the most common types, there is a strong asthenic emphasis. Soberness and a persevering will, especially in worthwhile work, are the outstanding qualities. There is also a type showing quicker adaptation and thought, although the latter is critical and markedly constructive.—P. L. Krieger (Leipzig).

381. Nelson, E. Attitudes: I. Their nature and development. *J. gen. Psychol.*, 1939, 21, 367-399.—A review of the literature on the nature and the development of attitudes.—C. N. Cofer (Brown).

382. Nelson, E. Attitudes: II. Social attitudes. *J. gen. Psychol.*, 1939, 21, 401-416.—In this paper the author summarizes the literature on attitudes toward personal ideals, attitudes toward political issues, racial attitudes, and religious attitudes.—C. N. Cofer (Brown).

383. Nelson, E. Attitudes: III. Their measurement. *J. gen. Psychol.*, 1939, 21, 417-436.—In this article the writer reviews the literature on attitude measurement. A general summary of the material covered in this and two previous papers is made, and a bibliography of 183 titles is included.—C. N. Cofer (Brown).

384. Pintner, R., & Forlano, C. Dominant interests and personality characteristics. *J. gen. Psychol.*, 1939, 21, 251-260.—Female college students were given the Allport and Vernon study-of-values test and the Thurstone personality schedule. The population was then divided into six groups according to the highest interest value for each individual, and the mean Thurstone scores for the six groups calculated. The latter scores also were calculated for six groups according to the lowest interest value for each individual. Between the high and low value groups for a given interest there were no significant differences in Thurstone score, although there was a trend for the high interest groups to be less neurotic. For the six interest-value groups Thurstone items discriminative of the high value groups from the low value groups were tabulated. "More discriminatory responses were marked in a maladjusted direction by the low than by the high groups." Discriminative items are listed for each interest group, with reference to whether it was marked in a maladjusted direction by the high or low value group. No "clearcut patterns of maladjusted tendencies characterizing the various interest-value trends of divergent groups" were discovered. Limitations of the study are noted.—C. N. Cofer (Brown).

385. Reitmann, F. Goya: a medical study. *Character & Pers.*, 1939, 8, 1-17.—Goya's prepsychotic personality was querulous and belligerent. His reactions were erratic and at times psycho-

pathic. After an analysis of Goya's pictures, the author attempts a definition of his psychosis, which appeared in middle age and again in later life. A diagnosis of melancholia or depressive psychosis is contradicted, first, by his prolific output. More than one third (600) of his paintings were produced during his periods of mental illness. Second, his works were too well integrated to come even from agitated melancholia. Rather, his personality, his bellicosity, his paranoid attitude, and the abnormal character of his paintings suggest a diagnosis of schizophrenia. Six paintings are featured and a list of 20 references is appended.—*M. O. Wilson* (Oklahoma).

386. Schrieder, E. *Les types humains. I. Les types somatiques. Raciaux—morphologiques—constitutionnels. II. Les types psychologiques. Tempéraments—caractères—types d'orientation générale de l'esprit—types psychoanalytiques—types réflexologiques—types psychosociologiques. III. Les types psychosomatiques. Variétés neurovégétatives. Constitutions somatopsychiques. Biotypes et variétés endocrinologiques. Types criminels.* (The human types. I. The somatic types—racial, morphological, constitutional. II. The psychological types—temperaments, characters, types of general mental orientation, psychoanalytic types, reflexological types, psychosociological types. III. The psychosomatic types—neurovegetative varieties, somatopsychic constitutions, biotypes and endocrinological varieties, criminal types.) *Actualités sci. industr.*, 1937, Nos. 495, 496, 497. Pp. 104; 79; 105.—I. A review of the methods used to classify types, with details of the French and Italian methods. The index of Viola is preferred for the physical type. II. The several classifications of the psychoanalytic, psychiatric, and endocrinological schools are shown to have few elements in common and are therefore not strictly comparable. III. The studies of Jaensch, Kretschmer, and Pende are emphasized in the relationship between the physique and the psyche. This volume brings together the trends in the others and indicates that more careful work is necessary for final conclusions. Criminal types are considered in a chapter.—*O. W. Richards* (Spencer Lens Company).

387. Seabury, D. *Why we love and hate.* New York: Whittlesey House, McGraw-Hill, 1939. Pp. 447. \$2.75.

388. Smiles, S. *Der Charakter.* (Character.) Stuttgart: Kröner, 1939. Pp. 211. RM. 1.80.—A translation by H. Schmidt-Jena of the English book of the same name.

389. Stokvis, B. *De individuele reactiewijze bij psychofysiologisch onderzoek.* (Individual reaction types in psychophysiological examinations.) *J. belge Neurol. Psychiat.*, 1939, 39, 463-468.—In investigations on the relationship between psychological phenomena and their vegetative expressions the individual variations are very striking. On the basis of the classification established by Heymans, which differentiates 8 personality groups, the author studied in 70 subjects the blood volume, blood pres-

sure, and psychogalvanic reflex. He came to the conclusion that there exists a close relationship between a person's type of physiological reaction and his type of temperament.—*H. Syz* (Cornell).

390. Stromberg, E. L. *The agreement between associates' ratings and self-ratings of personality.* *Psychol. Bull.*, 1939, 36, 629.—Abstract.

391. Textor, H. *Wahrnehmung und konstitutionell-typologische Veranlagung.* (Perception and the dispositions of constitutional types.) *Untersuch. Psychol. Phil.*, 14, 1. Göttingen: Calvör, 1938. Pp. 45.—Extraverts have better capacity for deep localization, also a greater stereo effect and less variation on repeated localizations, than introverts. They also have greater breadth of fusion and can blend retinal images of greater transverse disparity. They show a more plastic sense of direction and are better adapted for observation of phenomena in which the productive principle of fusion predominates.—*P. L. Krieger* (Leipzig).

392. Thornton, G. R. *A factor analysis of tests designed to measure persistence.* *Psychol. Monogr.*, 1939, 51, No. 229. Pp. 42.—The purpose of this study was to determine the variables of behavior which are measured by tests designed to measure persistence. A battery of performance tests and 12 other measures were administered to 189 college students. The intercorrelations were analyzed by Thurstone's multiple-factor methods. "The analysis did not reveal the presence of any factor universal to the tests. In other words, the tests which purport to measure persistence do not all measure the same thing. Nor did the analysis reveal a factor common to the self-estimates of persistence and any of the performance tests. The analysis did reveal the presence of five approximately independent factors that are important in the tests studied. These factors are identified tentatively as (1) withstanding discomfort to achieve a goal, (2) keeping on at a task, (3) sex-strength, (4) feeling of adequacy, (5) mental fluency. Of these the first four are important in tests previously proposed as measures of persistence." The possible practical importance of the first two factors and the possibility of developing batteries to measure these factors are suggested.—*K. F. Muensinger* (Duke).

393. Tramer, M., Baumgarten-Tramer, F., & Solberger, H. *Die Ergänzung.* (Completion.) *Z. Kinderpsychiat.*, 1939, 6, 77-83.—The authors are concerned with the phenomenon in which a person with some real or imaginary failure or lack in himself attempts to overcome this by associating himself with one having the characteristic. For example, the easily excitable person seeks out one who is equable. An investigation in the Berne schools disclosed that in children of all ages there is a desire to have friends of different external appearance from oneself.—*D. Shakow* (Worcester State Hospital).

[See also abstracts 74, 276, 297, 333, 407, 410, 415, 420, 424, 425, 429, 431, 434, 435, 470, 507, 519, 532, 534, 571, 600.]

GENERAL SOCIAL PROCESSES

(incl. Esthetics)

394. **Adams, G.** *Workers on relief*. New Haven: Yale Univ. Press, 1939. Pp. ix+344. \$3.00.—The book consists of an introduction and 8 chapters, of which the last 7 are psychologically written case histories and the first a description of the evolution of the WPA. Many details of administration and day-to-day activities are included in the histories.—*R. R. Willoughby* (Brown).
395. **Ammann, H.** *Sprache und Wirklichkeit*. (Speech and reality.) *Forsch. Fortschr. dtsh. Wiss.*, 1938, 14, 282.—The author expresses his opinion concerning the life content of the verbal sentence form.—*P. L. Krieger* (Leipzig).
396. **Annis, A. D.** *The relative effectiveness of cartoons and editorials as propaganda media*. *Psychol. Bull.*, 1939, 36, 638.—Abstract.
397. **Anthony, J. J.** *Marriage and family problems and how to solve them*. New York: Doubleday, 1939. Pp. 291. \$1.98.
398. **Asher, R., & Sargent, S. S.** *Shifts in attitude caused by cartoon caricatures*. *Psychol. Bull.*, 1939, 36, 638.—Abstract.
399. **Beach, D. M.** *The phonetics of the Hottentot language*. New York: G. E. Stechert, 1939. Pp. 329. \$6.00.—See XII: 4850.
400. **Beckham, A. S.** *The intelligence of a Negro high school population in a northern city*. *J. genet. Psychol.*, 1939, 54, 327-336.—The Henmon-Nelson tests of mental ability were given to 284 freshmen, 264 sophomores, 187 juniors, and 177 seniors in a Chicago Negro high school, selected by taking every tenth name (every fifth name for seniors) from an alphabetical list. Each group included a CA range of 7 or 8 years and each was average in intelligence, including scholastically retarded, normally placed, and advanced students. Tables showing IQ range and mean IQ for each age level, as well as age distribution within each group, are included.—*D. K. Spelt* (Mississippi).
401. **Bogue, B. N.** *Stammering; its cause and correction*. (Rev. ed.) Indianapolis: Author, 1939. Pp. xii+287. \$3.00.—“My own experience as a stammerer and my long teaching experience subsequently, enable me to base this book on knowledge that is intensely practical, strictly authoritative and of priceless value in showing others . . . the way to normal speech.” This is a third revision of a book first published in 1919. There are five sections: I. My life as a stammerer; II. Stammering and stuttering; III. Effects upon the individual; IV. Case histories; V. Correction of stammering and stuttering. In the final section the author promises a complete and “authoritative” diagnosis of speech defects by mail upon the receipt of a completed questionnaire. Prospective patients for the Bogue Institute are informed by this method the type of their speech disorder, its cause, and whether or not they can be restored to normal speech. The Bogue Unit Method of speech correction consists of three steps: “build up the physical being”; “achieve perfect mental equilibrium”; and “link up the physical with the mental, in perfect harmony.”—*C. V. Hudgins* (Clarke School).
402. **Borchers, G. L.** *Living speech*. New York: Harcourt, Brace, 1938. Pp. 289. \$1.32.—This is the University of Wisconsin secondary school speech text.—*R. R. Willoughby* (Brown).
403. **Bryngelson, B.** *A study of laterality of stutterers and normal speakers*. *J. Speech Disorders*, 1939, 4, 231-234.—78 stutterers between the ages of 17 and 31 years, and 78 normal speakers matched for sex and age were tested for laterality. The significant differences between the two groups fall into three categories: A greater number of stutterers are ambidextrous, a greater number of stutterers report shifting of handedness, and a smaller number of stutterers are strictly “one sided.”—*C. V. Hudgins* (Clarke School).
404. **Burgess, E. W., & Cottrell, L. S., Jr.** *Predicting success or failure in marriage*. New York: Prentice-Hall, 1939. Pp. xxiii+472. \$2.50.—An index of marital adjustment, with happiness the criterion, was constructed from some of the items of a marriage study questionnaire given to 526 Illinois couples. Other questionnaire items relating to the individuals’ premarital and postmarital background were then examined in the light of the degree of their association with the adjustment score. Some factors found to be associated with “good” adjustment are: agreement in handling finances, similarity of cultural background, happiness of parents’ marriage, acquaintanceship of several years before marriage, desire for children, and steady employment of husband. Contrary to popular belief, wide religious and educational differences are relatively unimportant to marital happiness, but long courtships and increasing amounts of education are favorable to marriage success. The chief objective of the authors is to form a prediction score from those background items most significantly associated with the adjustment score. (As in the case of the adjustment index, reliability and validity data are given.) Prediction of success or failure in marriage is feasible within limits, the authors maintain, and its precision can be improved by combining case study analysis with the statistical procedure.—*D. R. Riggs* (Burlington, Vt.).
405. **Burns, S. T.** *Measurement in music*. *Bull. Sch. Educ. Ind. Univ.*, 1939, 15, No. 4, 3-9.—Tests of musical talent have a value as a basis of encouragement for subjects having good scores. They should not be used to discourage those with low scores from undertaking music study.—*C. M. Louttit* (Indiana).
406. **Card, R. E.** *A study of allergy in relation to stuttering*. *J. Speech Disorders*, 1939, 4, 223-230.—A group of 40 stutterers were tested intradermally for allergic reactions. All of them showed positive reactions. “It was quite noticeable that the severity of the stuttering was usually in proportion to the percentage of the reactions and/or their severity.”

The selection of antigens in each case was determined by foods most common in the stutterer's diet. The average severity of the reactions indicates that stutterers are more sensitive than average normal individuals. This preliminary study reveals sufficient evidence to warrant further study.—*C. V. Hudgins* (Clarke School).

407. Chappell, M. N. *Back to self-reliance*. New York: Whittlesey House, McGraw-Hill, 1939. Pp. 248. \$2.00.—A criticism of the lack of self-reliance in modern Americans, in which the author shows how paternalism in the home, school, society, and government exerts a disintegrating influence on character and personality.—(Courtesy *Publishers' Weekly*).

408. Chase, W. P. *Attitudes of North Carolina college students (women) toward the Negro*. *Psychol. Bull.*, 1939, 36, 617.—Abstract.

409. Conklin, E. G. Does science afford a basis for ethics? *Sci. Mon.*, N. Y., 1939, 49, 295-303.—The scientist finds abundant evidence of the natural origin of ethics. Ethics, as the science of right conduct, develops out of such simple functions as sensitivity, reflexes, and trial and error. It can definitely be said to exist when "purpose and freedom (measured by the extent to which remembered experiences influence behavior) joined to social emotions shape behavior not only for personal but also for social satisfactions."—*O. P. Lester* (Buffalo).

410. Cook, S. W., & Raskin, E. The relationship between certainty of opinion and amount of self-estimated information. *Psychol. Bull.*, 1939, 36, 626.—Abstract.

411. Davis, F. C. The gambling "instinct." *Psychol. Bull.*, 1939, 36, 650-651.—Abstract.

412. Dewey, J. *Freedom and culture*. New York: Putnam, 1939. Pp. 176. \$2.00.—Dewey's thesis is that, by regulating individual behavior in its economic, religious, artistic, moral, and scientific patterns, human culture, which is the complex of conditions in any society expressed in its customs, not only determines, by interaction with native human make-up, the nature of the individuals in society, but also determines the political institutions of the society and thereby the extent of political freedom. A free culture is the necessary condition for political freedom. Applying this thesis to the analysis of present social and political affairs, particularly in America, Dewey concludes that a culture in which democratic ends were sought by cooperative and experimental democratic methods would be such a free culture.—*J. H. Jackson* (Brown).

413. Dodd, S. C. A system of operationally defined concepts for sociology. *Amer. sociol. Rev.*, 1939, 4, 619-634.—"Upon delimiting the field of sociology as those characteristics common to all classes of social phenomena, and upon taking as the unit of observation 'a situation' specified as any unitary, quantifiable set of societal data, an 'S-theory' is sketched in this paper which offers a system of sociological concepts." A large number of social

situations have been gathered from the literature of sociology and have been classified according to four variables: time, space, number of people, and qualitative characteristics of the people. The author believes that his system of classification has the following values: "(a) it develops symbols for qualitative phenomena which bring them within the realm of exact mathematical procedures, within certain limits; (b) it develops an interaction matrix which is believed to be the most important tool that has been sharpened to date for exact analysis of the structure of human groups; (c) it develops a comprehensive classification of societal data, the classes of which are 100 percent inclusive and 97 percent mutually exclusive by experimental determination."—*I. L. Child* (Harvard).

414. Drake, R. M. Factor analysis of music tests. *Psychol. Bull.*, 1939, 36, 608-609.—Abstract.

415. Draper, J. W. "Kate the curst." *J. nerv. ment. Dis.*, 1939, 89, 757-764.—The author traces the changes in the personality and behavior of Kate in Shakespeare's "Taming of the Shrew," and discusses them from the standpoint of psychotherapeutic procedure.—*R. C. Moore* (Boston Psychopathic Hospital).

416. Dudek, E. E. A factor analysis of a questionnaire on political attitudes of Czechoslovak students. *Psychol. Bull.*, 1939, 36, 637.—Abstract.

417. Edwards, A. L. The responses of 'communists' and 'non-communists' to concepts of state forms. *Psychol. Bull.*, 1939, 36, 637-638.—Abstract.

418. Farnsworth, P. R. An analysis of the behavior of critics. *Psychol. Bull.*, 1939, 36, 648.—Abstract.

419. Fay, P. J., & Middleton, W. C. Certain factors related to liberal and conservative attitudes of college students; sex, classification, fraternity membership, major subject. *J. educ. Psychol.*, 1939, 30, 378-390.—Under the conditions of this experiment (N=575) the attitude of male college students toward communism, the U. S. Constitution, law, and censorship tends to be more liberal than that of the female students. Among the findings were: a consistent trend toward liberalism from freshman to senior year; less tolerance among fraternity members and pledges toward communism than among unorganized students.—*R. M. Bellows* (Maryland).

420. Ferguson, L. W. The requirements of an adequate attitude scale. *Psychol. Bull.*, 1939, 36, 665-673.—The major requirements for an adequate attitude scale are: (1) it should give results corresponding to an underlying physical order; (2) scale values of statements chosen as landmarks should not be affected by other items in the scale; (3) attitudes of judges who sort the statements or of persons who take the test should not affect, markedly, the scale values of the statements; (4) the scale should be quite specific in content; (5) it must be valid; (6) it must be reliable; (7) it should be a measure of a linear continuum. Each requirement is discussed,

with references to the literature on attitude measurement. It is concluded that the method of equal-appearing intervals satisfies more of these requirements than any other method. 45 references.—*A. W. Melton* (Missouri).

421. **Fort, W. E.** Some important aspects of individualism and collectivism. *Psychol. Bull.*, 1939, 36, 613.—Abstract.

422. **Frank, L. K.** Dilemma of leadership. *Psychiatry*, 1939, 2, 343-361.—The need for leadership in any field arises from the fixed, rigid, and unchangeable patterns of thought and performance of those who, by position or seniority, control affairs, and this rigidity of the established order compels both a continued acceptance of the situation and a resistance to any change, however defective the order may be. Hence the task of leadership becomes one of forcing an acceptance of something which is desired but cannot be taken willingly, with the consequent transformation of the need for leadership into a need for the expression of the aggressions and hostilities of both the leader and his followers. The opportunity for such emotional expression is offered by a destructive leader, and hence there is ready acceptance of such leadership. The creative leader, however, serves primarily to establish a new order, but without affording an opportunity for the expression of the hostility and the aggression essential to the process of overcoming the established order. Hence there is an inability to recognize creative leaders when they appear and a failure to accept their contributions until some later time.—*M. H. Erickson* (Eloise Hospital).

423. **Gehlen, A.** Das Problem des Sprachursprungs. (The problem of the origin of speech.) *Forsch. Fortschr. dtsch. Wiss.*, 1938, 14, 291-293.—Speech forms a unity and directs entirely the special structure of human sensory and motor life. In it the experiences of communication culminate and the whole world is productively conquered.—*P. L. Krieger* (Leipzig).

424. **Gilliland, A. R.** Where do we get our attitudes? *Psychol. Bull.*, 1939, 36, 626.—Abstract.

425. **Gillin, J.** Personality in preliterate societies. *Amer. sociol. Rev.*, 1939, 4, 681-702.—This article is a review of the bulk of the special contributions made by anthropologists to an understanding of the relation of culture to personality, and of certain other related publications. The bibliography includes 231 titles. Each reference is briefly commented on at least once in the text, which considers the literature under the following subdivisions: (1) works tending to show individuality in preliterate societies; (2) social selection of personalities; leadership and distinction; (3) "ideal" or "typical" personalities as defined in various preliterate cultures; (4) biographical materials on individuals in preliterate cultures; (5) works dealing with formative periods in the life history, child training, etc.; (6) works dealing with "abnormal" personalities; (7) psychoanalytic approach to personality and

culture among preliterate peoples; (8) dreams; (9) some technical methods used in studying personality in preliterate cultures; (10) personality and the dynamics of culture and of society.—*I. L. Child* (Harvard).

426. **Gray, L. H.** Foundations of language. New York: Macmillan, 1939. Pp. 545. \$7.50.—An attempt to answer the problems raised by specialist and layman alike, to summarize the present state of linguistic knowledge, to set forth certain hypotheses which seem not wholly improbable, and to draw boundaries between what is generally accepted, what may fairly be inferred, and what is at present utterly unknown.—(Courtesy *Publishers' Weekly*).

427. **Gregory, W. S.** Ideology and affect regarding "laws" and their relation to law-abidingness. *Part II. Character & Pers.*, 1939, 8, 42-57.—Scales were constructed by means of the technique of equal-appearing intervals described in Part I (see XIII: 5825). Although the scales proved to have some degree of reliability, the predictive value of any one of the factors (ideology concerning the nature of law, affect toward the law, or law-abidingness) for the other two was not high. Very few significant differences between age, sex, religious and educational groups existed.—*M. O. Wilson* (Oklahoma).

428. **Hallowell, A. I.** Sin, sex and sickness in Saulteaux belief. *Brit. J. med. Psychol.*, 1939, 18, 191-197.—The Saulteaux are a hunting people of Ojibwa derivation living in the forested region east of Lake Winnipeg. Among the transgressions which are believed to cause disease, many are sexual offenses, of which twelve illustrations are given. After the offense is confessed to the native doctor, the disease is often cured. The offense of a parent may be held accountable for a child's illness. The integration of sin, sex, and sickness is discussed in relation to the social control thereby achieved.—*E. R. Hilgard* (Stanford).

429. **Hancock, J. W.** A study of the unit cost of obtaining attitudes. *Psychol. Bull.*, 1939, 36, 633.—Abstract.

430. **Hart, H.** Sorokin's data versus his conclusions. *Amer. sociol. Rev.*, 1939, 4, 635-646.—Some of Sorokin's conclusions about the relation between predominant methods of truth-seeking and other cultural characteristics of given periods in Western civilization are disputed, partly by reference to Sorokin's own data. Particularly is his dark prediction for the immediate future challenged. Comments by Sorokin appear at the end of the paper.—*I. L. Child* (Harvard).

431. **Hellpach, W.** Völkertum als Gegenstand der Völkercharakterologie. (The folk-ways as the subject matter of folk characterology.) *Forsch. Fortschr. dtsch. Wiss.*, 1938, 14, 267-269.—*P. L. Krieger* (Leipzig).

432. **Heltman, H. J.** A practical program of speech correction. *Amer. Sch. Bd J.*, 1938, 90, 31-32.—A program by a speech therapist for school administrators.—*C. V. Hudgins* (Clarke School).

433. Hische, W. *Die Eingliederung des arbeitenden Einzelmenschen in ein gemeinschaftlich arbeitendes Mehrzahlgebilde.* (The incorporation of the working individual into a social working group.) *Forsch. Fortschr. dtsch. Wiss.*, 1938, 14, 367-368.—P. L. Krieger (Leipzig).

434. Hopkins, P. *A personality study of an avatar of Krishna: an essay on Parekh's biography of Sri Swami Narayana.* *Character & Pers.*, 1939, 8, 71-80.—This analysis is based on the book *Sri Swami Narayana*, by B. M. C. Parekh, who is very sympathetic toward the Swami but not a professed believer in his teachings or a member of his church. It treats of such topics as the Swami's early experiences, preparation for his career, psychological insight, and powers attained.—M. O. Wilson (Oklahoma).

435. Johnson, G. B. *Personality in a white-Indian-Negro community.* *Amer. sociol. Rev.*, 1939, 4, 516-523.—The so-called Croatan Indians of North Carolina are a group of mixed racial origin with a social status intermediate between that of whites and Negroes. They form, in a sense, a third caste within a society which is organized primarily into two castes. The anomalies of this social position are described and are shown in relation to the aspirations and attainments of individual "Indians." General effects upon the personality are traced, with some attention to individual differences.—I. L. Child (Harvard).

436. Johnson, W. *Language and speech hygiene: an application of general semantics.* *Monogr. Inst. gen. Semantics*, 1939, No. 1. Pp. 54. \$1.50.—The monograph presents the principles of general semantics along with prophylactic and therapeutic techniques. The study of word-fact relations provides the core of general semantics. A chapter on "Measures of Language Behavior" is included.—C. V. Hudgins (Clarke School).

437. Kirkpatrick, C. *A methodological analysis of feminism in relation to marital adjustment.* *Amer. sociol. Rev.*, 1939, 4, 325-334.—The author lists five criteria for the scientific value of scholarly work: verifiability, transmissibility, consistency, implications, and scope. In the social sciences rival methodological camps have grown up. One, the quantitative, tends to employ only the first two criteria and sometimes the fifth; the other, the qualitative, tends to use only the criteria of consistency and implications and sometimes that of scope. The author urges the appropriateness of middle-of-the-road studies which would take account of all five criteria. As an illustration he presents a critical analysis of a study of his own on the relation of marital adjustment to attitudes toward feminism.—I. L. Child (Harvard).

438. Knudson, T. A. *A study of the oral recitation problems of stutterers.* *J. Speech Disorders*, 1939, 4, 235-239.—Information by the questionnaire method was obtained from 72 stuttering pupils and from 50 of their teachers. The purpose of the survey was to find out how the stuttering problem was handled and to obtain the reactions of the pupils

to current classroom methods. The teachers' reports indicated a lack of knowledge and preparation for handling stutterers in their classes. The pupils reported substitution of written for oral recitation, giving wrong answers, saying "I don't know," and truancy as some of the means by which they managed the stuttering problem in school. There was a general feeling among the pupils that teachers are not particularly helpful to stutterers. The author makes six recommendations.—C. V. Hudgins (Clarke School).

439. Lanier, L. H. *Science and society.* *Sih. Rev.*, 1939, 5, 105-120.—Lanier examines the theses of Bertrand Russell's *A new social analysis* and John Dewey's *The theory of inquiry*. He develops the notion that the advocates of the "scientific" regulation of society have not explored completely the implications of such a program. "Intelligent" action is not necessarily "scientific" action, and "evaluative judgment constitutes perhaps the most fundamental operation in social inquiry." Rigorous experimental control of society is repugnant to the individual; it is possible that validity of social inquiry may be found to best advantage in the democratic framework.—F. W. Finger (Brown).

440. Laserson, M. M. *Rights, right-handedness, and uprightness.* *Amer. sociol. Rev.*, 1939, 4, 534-542.—"This essay is an investigation of the idea of right and law as revealed by the common verbal symbols of people in various nations at various times." Emphasis is placed upon the frequency with which a single word or root applies at once to the correct (or legal or just), to the right hand, and to straightness. This finding is supported by illustrations from a number of linguistic families, and is interpreted as growing out of the basic conditions of human labor and social life.—I. L. Child (Harvard).

441. Lasswell, H. D. *Intensive and extensive methods of observing the personality-culture manifold.* *Yenching J. soc. Stud.*, 1938, 1, 72-86.

442. Le Bon, G. *Psychologie der Massen.* (Crowd psychology.) (6th ed.) Stuttgart: Kröner, 1939. Pp. xxiii+186. RM. 3.50.—Translation from the French work *Psychologie des Foules*.

443. Leith-Ross, S. *African women. A study of the Ibo of Nigeria.* London: Faber & Faber, 1939. Pp. 367. 15 s.—These agricultural people have lost many primitive customs, even though they have had limited contact with Europeans through missionaries and British officials. Women take an active part in work in the fields and in trading. The women have become a more unified group than the men, even to a unified riot in protest against taxation. The husbands take pride in their wives' accomplishments and allow them a voice in the community. A good part of the author's life has been in this region and her comments cover most of the life of this people, who number about three millions.—O. W. Richards (Spencer Lens Company).

444. Lichte, W. H. *An analysis of perceptible series of partials in a vocal sound.* *Psychol. Bull.*, 1939, 36, 632.—Abstract.

445. Lin, M. H. **Antistatistism: essay in its psychiatric and cultural analysis.** Washington, D. C.: William Alanson White Psychiatric Foundation, 1939. Pp. 87.—Taoist, Cynic-Stoic, liberal, communist, and anarchist theories of the "stateless society" are examined. Antistatistism may be classified from the points of view of goal and method. The goal may be either retrospective (Laotzu, Zeno, Rousseau, and others who wish to return to an original "state of nature") or prospective (communists, anarchists, and others who wish to construct or predict some future social order). The method may be introversive (personal self-liberation through the freedom and peace of meditation) or extraversive (personal effort to bring about social change). Viewed as a social phenomenon, antistatistism generally emerges from a frustrated social class; as a psychiatric phenomenon, antistatist theory generally emanates from an individual whose self-esteem has been wounded through deprivations or discriminations and who discharges his energies according to patterns that are familiar to the psychiatrist.—B. L. Smith (New York University).

446. Löffler-Herzog, A. **Ein Beispiel von Vererbung musikalischer Begabung.** (An example of the inheritance of musical talent.) *Arch. Klaus-Stift. Vererb. Forsch.*, 1939, 14, 195-198.—The author gives a genealogical tree, starting with very musical ancestors and showing in one branch a gradual, and in the other a sudden development of musical talent. The apparent reappearance after a latency during several generations is interesting.—P. L. Krieger (Leipzig).

447. Lovell, G. D. **Interrelations of vocabulary skills: commonest vs. multiple meanings.** *Psychol. Bull.*, 1939, 36, 635.—Abstract.

448. Maling, T. **Psycho-analysis and the study of politics.** *Sociol. Rev.*, 1939, 31, 210-221.—The study of political institutions and political ethics is not political science because there is no attempt at explanation or formulation of general laws. By means of psychoanalysis the political scientist can understand and explain political events and institutions. The raw material of political science exists in history. Historical or sociological data should be studied in the light of the broad principles of psychoanalysis to discover mass emotional disturbances; then if parallel examples can be discovered in the case histories of individual patients, there will be grounds for interpreting the emotional forces at work in society along the same lines as are used in interpreting emotional disturbances in individuals.—N. Frederiksen (Princeton).

449. Mayo, E. **Routine interaction and the problem of collaboration.** *Amer. sociol. Rev.*, 1939, 4, 335-340.—The author proposes "a positive exposition of the highly important function served by habit and social routine in relating the individual to the group, in securing that spontaneous and intimate cooperation without which society cannot continue to exist." Most of the article is devoted to a portrayal of a few revolutionaries as instances

of the breakdown of that function.—I. L. Child (Harvard).

450. McCormick, T. C. **Quantitative analysis and comparison of living cultures.** *Amer. sociol. Rev.*, 1939, 4, 463-474.—The author is interested in quantifying the description of cultures and sub-cultures and of inter-cultural differences. To this end he suggests the recording of the actual incidence, in selected populations, of behavior items that may be treated as representing culture elements; the problems of sampling and recording are discussed. Methods of tabulating data and applying correlation techniques are presented at length.—I. L. Child (Harvard).

451. Mead, M. **From the South Seas; studies of adolescence and sex in primitive societies.** New York: Morrow, 1939. Pp. 1072. \$4.00.—A one-volume edition of three anthropological works: "Coming of age in Samoa," "Growing up in New Guinea," and "Sex and temperament."—(Courtesy *Publishers' Weekly*).

452. Meier, N. C. **The interlinkage of hereditary elements (ancestral occupations) with present artistic aptitude.** *Psychol. Bull.*, 1939, 36, 623.—Abstract.

453. Meltzer, H. **Nationality preferences and stereotypes of colored children.** *J. genet. Psychol.*, 1939, 54, 403-424.—The nationality preferences of 364 colored school children were secured, as well as reasons for these preferences. 1265 white school children in the same southern city also indicated their preferences among the same 21 nations and races. The Negro was ranked first by Negroes, 20th by whites. Likewise more favored by Negroes were the Japanese, Mexican, South American, and Chinaman. Less favored by the Negroes were German, Pole, Swede, Jew, Scotch, and Greek. Negroes indicated "intense like" reactions much more frequently than "intense dislike," and more "like" than "dislike" reactions. The descriptive phrases (concepts) applied to various groups were definitely stereotyped, the 6 commonest offered for any nationality including 45-91% of all those submitted. Stereotypy was most characteristic of reasons given for unfavorable reactions.—D. K. Spelt (Mississippi).

454. Milisen, R. L. **Measurement of speech and hearing defects.** *Bull. Sch. Educ. Ind. Univ.*, 1939, 15, No. 4, 25-29.—Brief description of types of speech defects, including etiology and methods of examination.—C. M. Louttit (Indiana).

455. Miller, D. C. **An experiment in the measurement of social interaction in group discussion.** *Amer. sociol. Rev.*, 1939, 4, 341-351.—A method of recording social interaction in class discussions is worked out and applied to a class in educational psychology. Each statement made in the discussion is classified as a supported opinion, inference question, factual statement, etc., and the duration and the name of the speaker are recorded. The method of recording is fairly reliable. Degree of participation by a student shows only low correla-

tion with various measures of personality and intelligence. Tentative conclusions are presented about what factors make group discussions successful; for example, "whenever the instructor employs inference questions the discussion is improved."—*I. L. Child* (Harvard).

456. **Miller, E.** *The generations: a study of the cycle of parents and children.* London: Faber & Faber, 1938. Pp. 276. 7/6.—Miller here considers the family. He studies its history; the marriage relationship, especially with relation to the temperamental background involved; the development of child character, both in general and as it is itself directly affected by membership in the family group; the problems of puberty and adolescence; the character of parents; the desire for parenthood; problems of the growing family; and healthy family life. He also deals with what he considers to be the probable future of family life. All the topics are considered in a factual manner, with special reference to the psychological and sociological problems involved.—*F. C. Bartlett* (Cambridge, England).

457. **Mills, C. W.** *Language, logic, and culture.* *Amer. sociol. Rev.*, 1939, 4, 670-680.—A number of writers have maintained that social contexts are an important determinant of thought. Accepting this thesis, the author urges the need for an understanding of the socio-psychological processes by which this determination is effected. He attempts a beginning in this direction in a discussion of language and meaning as being largely given by the culture and as in turn molding and limiting reflective thought.—*I. L. Child* (Harvard).

458. **Mock, J. R., & Larson, C.** *Words that won the war: the story of the Committee on Public Information, 1917-1919.* Princeton: Princeton Univ. Press, 1939. Pp. xvi+372. \$3.75.—The files of the Committee on Public Information, America's first propaganda ministry, 1917-1919, were placed in the National Archives in 1937, having reposed in the Munitions Building for the previous 16 years. The papers had shrunk to less than a quarter of their former bulk, "partly for unexplained reasons. . . . But the papers that remain—hundreds of thousands of them—provide an historical source of the first importance. . . . The authors have consciously restricted themselves to intensive study of these files, though fully realizing that words alone did not win the war." George Creel, Committee head, newspaper crusader, and Wilsonian idealist, emerges as a "remarkable man, who in spite of having more than a fair share of mercurial temperament, carried his liberalism through the hatred and hysteria of war." The other members of the Committee were the Secretaries of State, War, and Navy. Organized into two major divisions, the foreign and domestic, the Committee had more than a score of special divisions, of each of which the personnel, activities, and expenditures are traced in detail. Proposed blueprints for "Tomorrow's Committee" are reviewed. "If the record of the last war is to be taken, American resistance

to repressive measures may not be great. The question arises whether, in the event of a new war, America would feel like indulging in the luxury of some 'Creel Committee' to stand as buffer between military dictatorship and civil life."—*B. L. Smith* (New York University).

459. **Moore, J. E.** *Sex differences in rate of reading.* *Psychol. Bull.*, 1939, 36, 620-621.—Abstract.

460. **Morris, D. W.** *The speech survey.* *J. Speech Disorders*, 1939, 4, 195-198.—Data are presented to show that speech surveys differ in findings as to number and type of speech defects to a wide degree. The usefulness of such surveys will depend upon the ability of speech workers to agree upon a standard method of making surveys and upon criteria of speech defects. Methods and results of two surveys by the author are presented to show a possible approach to the problem.—*C. V. Hudgins* (Clarke School).

461. **Moshinsky, P.** *The correlation between fertility and intelligence within social classes.* *Sociol. Rev.*, 1939, 31, 144-165.—The relationship between fertility and intelligence in fairly restricted social and socio-economic groups was investigated by studying the correlation between number of siblings and intelligence of 10,159 school children between the ages of 9 years and 12 years 6 months. Low negative correlations were obtained between size of family and intelligence of the offspring; the magnitude of the correlation varies with social class and the socio-economic grouping. Comparison of various school groups suggests that "the more favorable the environment, the less obvious is the connexion between the intelligence of the children and the sibship to which they belong." There is a significant negative correlation between fertility and intelligence among individuals in the category of skilled and clerical workers, but no significant correlation for the poorest and the most prosperous sections of the community. Possible interpretations of these findings are discussed.—*N. Frederiksen* (Princeton).

462. **Mosier, C. I.** *A psychometric study of meaning.* *Psychol. Bull.*, 1939, 36, 607-608.—Abstract.

463. **Oizumi, Y.** [Studies on suicide.] *Nagoya J. med. Sci.*, 1938, 48, 587-655.—In Japan suicide is responsible for 1.21% of all deaths, and holds the 17th place. Suffering from illness is the most frequent motive in suicide, though under 16 years of age in both sexes a master's reproach has a prominent place, and as age proceeds there are many who lay down their lives from a hard existence. The favorite means of suicide are, in order, hanging, drowning, and poisoning. The frequency is highest from 20 to 24 years in the male and from 18 to 22 in the female; the sex ratio is 5 males to 3 females. It is more frequent in males with occupations and females without occupations; it is most frequent in May and least in February, though drowning is most frequent in July; the daily peaks are at 1 to 2 a.m. and

11 to 12 p.m. There is some correlation between weather and suicide; it is infrequent in years of strong wind and clear weather, but frequent in years of much rain; there is a positive relation between mental disease and suicide.—*R. Kuroda* (Keijo).

464. **Osborn, J. J.** The vanishing race of Princetonians. *Princeton Alumni Wkly*, 1939, 40, 45-48.—A study is reported which undertook to gather statistics on the number of offspring of 1856 Princeton alumni from the classes of 1891, 1900, 1902, 1912, 1913, and 1921. The results are presented in a table which shows the percent married, children per man, and children per married man, for various classifications of the individuals studied. These classes are ministers, most successful businessmen, moderately successful businessmen, least successful businessmen, professors, lawyers, and doctors. Ministers rank highest in number of children per man (2.06), and the least successful businessmen lowest (1.20). It is pointed out that the average Princeton graduate produces only 1.6 children, while he needs 2.3 children to replace himself. A questionnaire was also sent to the same alumni in an attempt to determine the possible reasons for limiting, or not limiting, family size. The most frequently checked reason for the former was limited financial means; for the latter, the companionship of young children. Other reasons are also reported. The inadequacies of this questionnaire are discussed.—*R. M. Gagné* (Brown).

465. **Pusitz, M. E.** Speech correction in cerebral palsies. *J. Speech Disorders*, 1939, 4, 205-218.—"Cerebral palsy" is more descriptive than "spastic paralysis" since the disorder is not paralysis but rather hypertension in muscles. The clinical and neurological syndromes will depend upon which of the three motor systems is involved: the pyramidal, extrapyramidal, or cerebellar. The etiology, pathology and neurology of the disorder are discussed as a preliminary to the discussion of general treatment. Treatment and training in motor skills, including speech, require thorough knowledge of the nature of the disorder and should be attempted only in collaboration with a neurologist. Three general steps are to be followed in treatment: relaxation of the muscles involved, or conditioned inhibition; passive and assisted movements of the limbs involved; and imitative voluntary movements. Detailed methods for inducing relaxation are described. In speech correction the general therapeutic methods are applied to the speech muscles. "The method correlates visual, auditory, and proprioceptive impulses with definite motor acts, through the inhibition of increased muscle spasm."—*C. V. Hudgins* (Clarke School).

466. **Reed, S. L.** A study of war attitudes. *Proc. Okla. Acad. Sci.*, 1939, 19, 155-156.—At the time when Hitler first threatened the territorial integrity of Czechoslovakia, the author administered two standardized attitude scales (Thurstone) to 203 college students. Two months later, at a time when the war crises had more or less disappeared, two

other equivalent forms were administered to the same group. The results may be summarized as follows: (1) the group as a whole was strongly pacifistic; (2) the attitudes of each individual were very uniform; (3) the attitudes were relatively permanent; and (4) differences between groups (sex, religious, national, occupational, economic) were slight.—*M. O. Wilson* (Oklahoma).

467. **Rigg, M. G.** Measuring the ability to judge poetry. *Proc. Okla. Acad. Sci.*, 1939, 19, 157-158.—The Rigg poetry test is discussed from the standpoint of its development, validity, reliability, and use. The latter includes appraisal in literature classes, aid as a teaching device, and use as a research tool.—*M. O. Wilson* (Oklahoma).

468. **Rigg, M. G.** Speed as a determiner of musical mood. *Psychol. Bull.*, 1939, 36, 627.—Abstract.

469. **Rutherford, B. R.** Frequency of articulation substitution in children handicapped by cerebral palsy. *J. Speech Disorders*, 1939, 4, 285-287.—Speech charts were kept over several years for 57 cases of cerebral palsy diagnosed as spastic or pyramidal (27 cases) and athetoid or extrapyramidal (32 cases). Speech sounds were listed as defective when they occurred in more than one year's charts. Rank lists of sounds taken from these charts indicate that the order of frequency is practically the same in the pyramidal and extrapyramidal groups. Other types of defects are discussed.—*C. V. Hudgins* (Clarke School).

470. **Sanborn, H.** Are there any individuals? *Psychol. Bull.*, 1939, 36, 611.—Abstract.

471. **Schmid, C. F.** Report of research census of 1939. *Amer. sociol. Rev.*, 1939, 4, 543-559.—This is a classified list of research projects being carried on by members of the American Sociological Society. 7 projects appear under the heading "Sociology and Psychiatry" and 49 under the heading "Social Psychology."—*I. L. Child* (Harvard).

472. **Seashore, C. E.** New approaches to the science of voice. *Sci. Mon.*, N. Y., 1939, 49, 340-350.—With the new techniques which have promoted the recording and transmission of sound, progress has been made in laying a foundation for a comprehensive science of voice. Some of the problems which can now be more adequately studied are: nature and action of vocal cords, oral resonance, harmonic analysis, complete and adequate recording of performance, the voice and the room, the phrasing score, the vibrato, expression of emotion through voice.—*O. P. Lester* (Buffalo).

473. **Shea, J. P., Curtis, J. W., & Kaufman, H. F.** Psychological and sociological factors determining man-caused forest fires. *Psychol. Bull.*, 1939, 36, 615-616.—Abstract.

474. **Smith, E. D., & Nyman, R. C.** Technology and labor; a study of the human problems of labor saving. New Haven: Yale Univ. Press, 1939. Pp. 222. \$2.50.

475. Stoddard, C. B. A public school approach to treatment of stuttering. *J. Speech Disorders*, 1939, 4, 219-222.—Methods of handling cases of stuttering in public schools involve training in the principles of normal speech, physical education, voice training, visualization, phonetics, mental hygiene, and spontaneous speech.—C. V. Hudgins (Clarke School).
476. Symonds, P. M. Research on the interviewing process. *J. educ. Psychol.*, 1938, 30, 346-353.—Factors which cause variations in interviewing results are inherent in the subject, the interviewer, the general situation in which the interview is conducted, and the form and content of the interview. Lists of each of these kinds of factors are given as a theoretical analysis of the interviewing process. Research in this field is difficult because of lack of standardized conditions and difficulty of recording the interview. Suggestions for research are made.—R. M. Bellows (Maryland).
477. Terman, L. M., & Johnson, W. B. Methodology and results of recent studies in marital adjustment. *Amer. sociol. Rev.*, 1939, 4, 307-324.—This is a critical review of major studies of marital adjustment published during the last decade. Investigations by Davis, Burgess and Cottrell, Bernard, Hamilton, Dickinson, Mowrer, Terman, and Kelly are considered. The authors emphasize the need of combining the statistical and clinical approaches.—I. L. Child (Harvard).
478. Thomas, C. K. Chinese difficulties with English pronunciation. *J. Speech Disorders*, 1939, 4, 255-259.—The author discusses the difficulties met by Chinese students in learning English phonemes and gives some of the typical errors. In comparison with characteristic speech of other foreigners the most distinctly Chinese characteristic pronunciations will be found in the following phonemes: *s*, *n*, *ng*, *l*, *r*, *j*, and *w*.—C. V. Hudgins (Clark School).
479. Timmons, W. M. Decisions and attitudes as outcomes of the discussion of a social problem. *Teach. Coll. Contr. Educ.*, 1939, No. 777. Pp. 106.—This study "attempts to determine experimentally whether information on and discussion of a social problem cumulatively contribute to appropriate attitudes and appropriate solutions." The problem concerned parole methods. Two experimental groups each with a control (high school juniors and seniors) were used (459 experimental and 213 control subjects). The experiment occupied four class periods, three on successive days and one a month later. Several measures and a mimeographed body of factual information on the problem were used. Experimental and control subjects were first measured, and both then read the factual information. The experimental group was then divided on the basis of test results into groups of four for discussion. The controls reread the material. The measurements were again made and repeated after a month. "It was found that the students who read and discussed were better able to arrive at good solutions than those who read and restudied. No differences were found with respect to attitude." The bibliography lists 35 titles. The information pamphlet is given in an appendix.—J. M. Stalnaker (Princeton).
480. Tinker, M. A., & Paterson, D. G. Legibility of newsprint. *Psychol. Bull.*, 1939, 36, 634.—Abstract.
481. Van Dusen, C. R. A laterality study of non-stutterers and stutterers. *J. Speech Disorders*, 1939, 4, 261-265.—40 stutterers and 40 non-stutterers were given tests to determine laterality. Differences in strength tests show non-stutterers to be more definitely right-handed. Differences in usage, as obtained from questionnaires, show stutterers to be more definitely right-handed. No significant differences were found between the two groups in laterality lead, speed, and accuracy.—C. V. Hudgins (Clarke School).
482. Warren, W. P. Religious values. *Psychol. Bull.*, 1939, 36, 592-593.—Abstract.
483. Watson, B. An experimental study of musical meanings. *Psychol. Bull.*, 1939, 36, 619.—Abstract.
484. Wepman, J. M. Familial incidence in stammering. *J. Speech Disorders*, 1939, 4, 199-203.—Incidence of stammering in the family background was studied in 250 stammering and 250 non-stammering cases. Results show that stammering tends to appear in the families of stammerers by a ratio of 6:1 over those of non-stammerers. The 250 families of stammerers showed a 69% incidence of stammering; in the non-stammerers' families this was reduced to 15.6%.—C. V. Hudgins (Clarke School).
485. Wheelwright, L. F. An experimental study of the perceptibility and spacing of music symbols. *Teach. Coll. Contr. Educ.*, 1939, No. 775. Pp. xiii+116+xxx.—This study attempts to determine (1) an approach to the experimental study of music reading, (2) the relative perceptibility of related music symbols, and (3) the effect of different spacing of music symbols. The first problem was attacked by the questionnaire method, and on the basis of 63 replies from a group of 105 selected music educators the two problems of the study were selected for experimental investigation. 50 students (12 to 15 years old) who had had musical training were tested for their ability to see various types of music symbols. The results led to the suggestion that perceptibility would be enhanced by redesigning the characters or printing them with greater definition. The hypothesis that for accurate perception the space between notes and rests should be proportional to the represented time values was tested by tachistoscopic studies and by sight reading of two types of spacing. Spacing consistent with time values, although not commonly used at present, is superior in ease of perception. The bibliography lists 42 titles. The appendix gives the questionnaires and the tests used and an example of music spaced in proportion to time values.—J. M. Stalnaker (Princeton).

[See also abstracts 5, 32, 35, 37, 38, 88, 127, 145, 240, 289, 292, 297, 300, 315, 335, 345, 354, 355, 379, 380, 381, 382, 383, 385, 390, 493, 495, 514, 519, 523, 532, 533, 536, 538, 552, 560, 571, 573, 590, 596.]

CRIME AND DELINQUENCY

486. Davidoff, E., & Buckland, G. Reaction of a juvenile delinquent group to story and drama techniques. *Psychiat. Quart.*, 1939, 13, 245-258.—The reactions of a group of juvenile delinquents to puppet techniques, drama techniques, and story-telling techniques were studied in comparison with a group of non-delinquents. In comparison with the control group, the delinquents showed a lack of creative ability, a predominance of individual over group effort, a destructive attitude toward the work of others, a tendency toward certain traits with overcompensation in respect to others, a centering of interests about the individual's own conflicts, a lack of leadership ability, and paucity of group action.—R. C. Moore (Boston Psychopathic Hospital).

487. Del Greco, F. Sulla necessità di uno studio psichiatrico e psicologico dei soggetti che delinquono. (On the necessity of a psychiatric and psychological study of delinquent subjects.) *Arch. Antrop. crim.*, 1939, 59, 138-145.—The author points out the importance of psychiatric and psychological examinations of all cases in order to select the best educational, penal, and therapeutic treatment for each individual delinquent.—T. M. Abel (New York City).

488. Dunham, H. W. The schizophrene and criminal behavior. *Amer. sociol. Rev.*, 1939, 4, 352-361.—Statistical data for Chicago were obtained from two sources for a study of the incidence of criminal behavior among the insane. Findings included the following: "(1) From a quantitative point of view, schizophrenia appears as a very negligible factor in the causation of crime. (2) In the few cases, however, where crime and mental disorder appear together in the same person, schizophrenia is apparently more significant than all other psychoses as a causative factor in crime. (3) Crimes against the person are the most frequent type when schizophrenia is a causative factor in crime." The criminal record is found in adulthood rather than adolescence. Paranoid schizophrenes show a criminal record twice as often as do the catatonic.—I. L. Child (Harvard).

489. Exner, F. Kriminalbiologie in ihren Grundzügen. (Outlines of criminal biology.) Hamburg: Hanseatische Verlagsanstalt, 1939. Pp. 368. RM. 15.—P. L. Krieger (Leipzig).

490. Franchini, A. Rilievi pratici di metodologia medico-legale in tema di delinquenza minorile. (Practical considerations of medico-legal methodology on the subject of delinquency among minors.) *Arch. Antrop. crim.*, 1939, 59, 184-206.—In medical and legal treatment of delinquents, the necessity for making use of social and familial

histories as well as psychological records is stressed. The author bases his discussion on a study of 100 cases in Genoa.—T. M. Abel (New York City).

491. Gentz, W. Neue Entwicklung im englischen Strafvollzug. (New developments in English penology.) *M Schr. Krim Biol.*, 1939, 30, 242-255; 289-303; 324-340.—Gentz summarizes from the annual reports of the English penal authorities between 1934 and 1937 the statistics on length of sentence, classification, treatment and work of prisoners, parole, and reforms of discipline in the institutions.—P. L. Krieger (Leipzig).

492. Hacker, E. Die Kriminalität der Schweiz in den Jahren 1931-1937. (Crime in Switzerland, 1931-1937.) *M Schr. Krim Biol.*, 1939, 30, 374-386.—Variations in crime in the different cantons, due to so-called criminogenic factors, are to be ascribed to differences in occupation, stability of the population, family conditions, and age distribution. The consequences in crime of the depression were apparent first in 1933, culminated in 1936, and have decreased since then. In consequence of the difficulty of temporary detention of foreigners, their contribution to criminality has decreased somewhat in recent years. The increase of crimes of negligence affecting person and life is due to the greater motor traffic. Delinquency of 12-17-year-olds shows a wave-like rise. The proportion of men to women criminals is about 100 to 11. Sexual and traffic crimes are more common among men, offenses against honor among women. The percentage of repeaters increased slightly up to 1936 and then fell. Switzerland has been spared a great fluctuation due to demoralizing post-war conditions. The suspended sentence has been applied chiefly to juveniles, and oftener to natives than to foreigners.—P. L. Krieger (Leipzig).

493. Hayner, N. S., & Ash, E. The prisoner community as a social group. *Amer. sociol. Rev.*, 1939, 4, 362-369.—Information about the social organization of the inmate group was obtained at a state reformatory for young men through the method of participant observation. The findings are summarized as follows: "The prisoner community is a social group developed by the outcasts of the larger society. The organization of this community is primarily an economic arrangement devoted to obtaining goods and services denied by the administration. Its entrepreneurs, middlemen, class structure, politicians, and social deviates are comprehensible in terms of the social situation in which the convicts find themselves. The development of conniving, with its code of deception, means that inmates have daily training in traits that make reformation difficult. The prisoner community with its connivings, its perversions, and its exchange of crime techniques reinforces those behavior tendencies which society wishes to prevent."—I. L. Child (Harvard).

494. Hirakawa, K., Ishibashi, B., & Kamada, J. [On mental ability of criminals. II.] *Gyōkei-eiseikai Z.*, 1938, 13, 605.—Speed of work, elaborate-

ness, grasping power, and strength of back and spine were measured in criminals to ascertain their motor capacity.—*R. Kuroda* (Keijo).

495. **Kempe, P.** *Criminaliteit en kerkgenootschap.* (Criminality and church affiliation.) Nijmegen-Utrecht: N. V. Dekker & Van de Vegt, 1938. Pp. xvi+199.—In Holland, especially around Utrecht, the Catholic population is decidedly more involved in crime than the Reformed, although this difference disappears with age. Kempe connects this with the economic and social backwardness of the Netherlands Catholics (Bonger). Catholic teaching emphasizes economic progress less than the Calvinistic.—*P. L. Krieger* (Leipzig).

496. **Lindner, T.** *Om förhållandet mellan psykiatri och rättskipning.* (On the relationship between psychiatry and the administration of justice.) *Soc.-med. Tidskr.*, 1939, 16, 121-127.—A general discussion, based on present conditions in Sweden, of the relationship between the medical-psychological view of crime and punishment and the strict legal consideration.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

497. **Mann, C. W.** *Age and intelligence of juvenile delinquents.* *Psychol. Bull.*, 1939, 36, 639-640.—Abstract.

498. **Quentin, H. G., & Sieverts, R.** *Die Behandlung der jungen Rechtsbrecher im Alter von 17 bis 23 Jahren in England unter besonderer Berücksichtigung des Borstalsystems.* (The treatment of juvenile delinquents aged 17 to 23 in England, with special reference to the Borstal system.) Heidelberg: C. Winter, 1937. Pp. 76. RM. 2.—*P. L. Krieger* (Leipzig).

499. **Saporito, F.** *I deboli dell' intelligenza e gli instabili del carattere in rapporto alla legge penale. Spunti ed appunti di criminologia minorile.* (The mentally deficient and psychopaths in relation to the penal law. Observations and remarks on the criminology of minors.) *Arch. Antrop. crim.*, 1939, 59, 88-137.—*T. M. Abel* (New York City).

500. **Specht, H.** *Friedrich Nietzsche's Anthropologie und das Strafrecht.* (Friedrich Nietzsche's anthropology and punishment.) *M Schr. Krim-Biol.*, 1939, 30, 353-372.—All powerful life justifies itself through itself. Questions of free will or subject and object are meaningless. The focus is the man and his actions as the sole reality, and only his value for life has meaning. If he succumbs to his unhealthy urges, he is responsible for it. The concern is the identity of value with the vital norm of his personality as a whole, outside of which there is nothing. This is the ultimate basis for responsibility. Instead of causal thought, the question arises only whether the act stands in vital relationship to the personality. Punishment serves life in the sense of Nietzsche's increasing of power and the super-individual hierarchy of order. It is therefore not a legal reaction but a punishment of life, i.e., the power of expression of life.—*P. L. Krieger* (Leipzig).

501. **Trasimeni, R.** *Contributo allo studio biosociologico dei minorenni denunciati per delitti.*

(Contribution to the biosociological study of delinquent minors.) *Arch. Antrop. crim.*, 1939, 59, 157-183.—A presentation of sample case histories collected for use in magistrates' courts in Italy.—*T. M. Abel* (New York City).

502. **Villinger, W.** *Zur Erneuerung des Jugendstrafrechts und des Strafvollzugs an Jugendlichen, insbesondere zur Frage des Jugendarrestes.* (Renactment of the law on juvenile delinquents and punishment of minors, especially the question of their arrest.) *M Schr. Krim-Biol.*, 1939, 30, 305-311.—The following principle holds for the punishment of both mentally normal and abnormal minors: The youth differs from the adult in that he is in a stage of radical physical transformation and conflict in his inner life through the overpowering urge for independence and simultaneously the subjective need for dependence and the objective necessity for guidance. Punishment of normal minors (mostly first offenders and comprising not more than 25-30% of juvenile delinquents) should be undertaken from the standpoint of sin; of the abnormal, from that of correctional education. In the first case, a warning or short period of arrest is sufficient, while in the second a long protective education or punishment in a prison for minors is necessary.—*P. L. Krieger* (Leipzig).

INDUSTRIAL AND PERSONNEL PROBLEMS

503. **Barnes, R. M.** *Motion and time study.* New York: Wiley, 1937. Pp. 285. \$3.75.

504. **Fletcher, E. D., & Brown, C. W.** *Some results from the use of special tests for automobile drivers in the state of California.* *Psychol. Bull.*, 1939, 36, 641.—Abstract.

505. **Hilgard, J. R.** *Strong vocational interest scores and completion of training in a school of nursing.* *Psychol. Bull.*, 1939, 36, 646.—Abstract.

506. **Johnson, H. M.** *Evidence for educational value in drivers' "clinics."* *Psychol. Bull.*, 1939, 36, 674-675.—A reply to H. R. DeSilva's (*Psychol. Bull.*, 1939, 36, 284-285) critique of a critique of evidence for the educational effectiveness of drivers' clinics by H. M. Johnson and P. Cobb.—*A. W. Melton* (Missouri).

507. **Kuiper, T., & Koningh, W. de.** *Positieve en negatieve beroepsanalyse.* (Positive and negative job analysis.) *Mensch en Maatsch.*, 1939, 15, 305-312.—Isolated aptitudes have received more than their just share of attention in many attempts at job analysis, usually at the expense of the integration of desirable qualities into a total personality pattern. A study of the reasons for the dismissal of 137 store managers is offered as a partial corrective. Specific information was obtained concerning qualities deemed sufficiently undesirable to constitute primary or secondary causes for dismissal. This should be useful in eliminating from consideration applicants who, because they possess similar traits, are likely to be poor employment risks. A summary of the detailed statistics offered shows that various types of intellectual insufficiency were responsible

for dismissal in 28% of the cases, carelessness and irresponsibility in 12.5%, inability to adjust habits and behavior traits in 33%, personality defects in 15%, and domestic reasons in 11.5% of the cases.—*H. Beaumont* (Kentucky).

508. **Lauer, A. R., & Silkett, A. F.** *Evaluation of factors involved in driver training.* *Psychol. Bull.*, 1939, 36, 633.—Abstract.

509. **Roethlisberger, F. J., & Dickson, W. J.** *Management and the worker.* Cambridge: Harvard Univ. Press, 1939. Pp. xxiv+615. \$4.50.—This volume summarizes the results of a research project in industrial relations in which the Industrial Research Department of the Harvard Graduate School of Business Administration cooperated with the Western Electric Company. 12 years of research bring the authors to a critical evaluation of the traditional view that workers, supervisors, or executives be considered apart from their social setting and treated as essentially "economic men." For example, "it became clear that the beneficial effects of rest pauses could be explained equally well in terms of the social function." The work involved was not heavy manual labor. Again, "the efficiency of a wage incentive is so dependent on its relation to other factors that it is impossible to separate it out as a thing in itself having an independent effect." The book, 26 chapters in length, is divided into 5 parts. There is a foreword by C. G. Stoll of Western Electric and a preface by Elton Mayo. 34 tables and 48 figures assist the reader in visualizing details.—*G. H. Estabrooks* (Colgate).

510. **Ruckmick, C. A.** *The electrodermal response to advertising copy.* *Psychol. Bull.*, 1939, 36, 627.—Abstract.

511. **Straub, W.** *Psychische Alkoholwirkung und Blutalkoholgehalt (bei Verkehrsunfällen).* (The mental effects of alcohol and the blood content of alcohol in traffic accidents.) *Forsch. Fortsch. dtsch. Wiss.*, 1938, 14, 400-401.—*P. L. Krieger* (Leipzig).

512. **Wyatt, S.** *Workers and machines.* *Occup. Psychol., Lond.*, 1939, 13, 249-257.—The increasing mechanization of the industrial operation results in the operator being an appendage to the machine and produces one constant effect, boredom, with its after-effects of dissatisfaction, loss of pride in work, and loss of self-respect. This condition can be alleviated in even the most mechanized industries by one or all of the following measures: (1) changing from one form of repetitive work to another at suitable times during the day; (2) introducing rest pauses; (3) adjusting the speed of the machine as closely as possible to the natural rate of working of the operator, but letting that be at his maximum rate so that complete attention will be necessary, and changing that rate at varying intervals as fatigue sets in; (4) introducing an hour of music at about the middle of the work spell; (5) putting workers side by side or in close physical relation who are temperamentally similar.—*H. Moore* (Mt. Holyoke).

[See also abstracts 90, 433, 568, 591.]

EDUCATIONAL PSYCHOLOGY

(incl. Vocational Guidance)

513. **Agnew, D. C.** *The effects of varied amounts of phonetic training on primary reading.* *Duke Univ. Res. Stud. Educ.*, 1939, No. 5. Pp. viii+50.—The author studied the effects of varying lengths of phonetic training on phonetic ability, word pronunciation, vocabulary, oral reading, silent reading, and eye-voice span of primary school children in Raleigh and Durham, North Carolina. His results showed that when phonetic training is given consistently and in large amounts it (1) "increases independence in recognizing words previously learned," (2) aids the pupil in recognizing unknown words, (3) aids correct pronunciation, and (4) increases the quality of oral reading. The study also showed that many of the objections against phonetics are exaggerated. Although it slows up oral reading, this is counteracted by greater accuracy in oral reading. There was no difference in silent reading ability between the group who had little or no phonetics and the group who had a large amount of phonetics. The implications of phonetic training in the primary grades are discussed.—*S. A. Kirk* (Milwaukee State Teachers College).

514. **Anderson, H. H.** *Domination and social integration in the behavior of kindergarten children and teachers.* *Genet. Psychol. Monogr.*, 1939, 21, 287-385.—This is a study of 49 children from three kindergartens. "Integrative behavior is defined as a phenomenon of growth in which the individual responds voluntarily and without coercion to differences in other persons. . . . Dominative behavior is defined as a technique of responding to others by which a person resists differences, resists change, resists growth." Cross-pairings of sexes as well as own-sex pairings were studied. Younger kindergarten children were also compared with older ones. The domination-integration ratio of teachers' contacts with individual children showed that domination contacts exceeded integration contacts. In the main the findings were essentially the same as those reported in a previous study on preschool children: 11 references are given.—*F. M. Teagarden* (Pittsburgh).

515. **Anderson, R. G.** *Training needs in relation to problems of counseling in elementary and high schools.* *J. consult. Psychol.*, 1939, 3, 147-152.—A review of the development of the recognition of psychological services in the elementary schools stresses the reason for past errors and misconceptions of function. Suggestions are given for the most profitable use of a test situation, particularly in connection with the evaluation of personality and of social adjustment and specific ideas presented for the training of counselors in high and elementary schools.—*P. S. de Q. Cabot* (Simmons).

516. **Asher, E. J., & Gray, F. E.** *The relation of personal history data to college success.* *Psychol. Bull.*, 1939, 36, 618.—Abstract.

517. Bailey, E. W., & others. *Studying children in school.* (2nd ed.) New York: McGraw-Hill, 1939. Pp. 189. \$2.00.—See VIII: 2256.

518. Ballard, P. B. *Philosophy and education. Character & Pers.*, 1939, 8, 58-70.—This discussion is based on two books published recently. One is T. H. Eaton's *An Approach to Philosophy of Education*, the thesis of which is that educational theory rests on values. First determine what human traits are most valuable, or most worthy of being preserved or improved. Then determine what aspects of the environment can best foster these traits. Answers to these questions will vary according as they are approached biologically, psychologically, or socially. The other is F. T. Strunck's *Creative Teaching: Industrial Arts and Vocational Education*. Although it is concerned with industrial education, the outlook is dominantly idealistic rather than utilitarian. Liberation of the spirit is as much the aim of the laboratory and the workshop as of the lecture room.—*M. O. Wilson* (Oklahoma).

519. Barkley, K. L. *Relative influence of commercial and liberal arts curricula in promoting changes in certain attitudes.* *Psychol. Bull.*, 1939, 36, 617-618.—Abstract.

520. Berrien, F. K. *Are first impressions best on objective tests?* *Sch. & Soc.*, 1939, 50, 319-320.—Over 90% of students in psychology classes, given an objective test made up of true-false and multiple-choice items, changed their answers, and in 58 to 77% of cases raised their scores by so doing. There was no demonstrable relation between class standing and the correctness of the changed answers. The hypothesis is that in a difficult examination only the superior students would make changes and in an easy examination it would be the poorer students who would reconsider. These results are in agreement with those from other similar studies.—*M. Lee* (Chicago).

521. Bingham, N. E. *Teaching nutrition in biology classes.* *J. exp. Educ.*, 1939, 7, 251-260.—This study of the relation of food to physical well-being was found to be truly educative in that pupils in varying types of school situations made significant gains as a result of instruction in their attitude toward food in diet, their information concerning the relation of food to physical well-being, and their application of principles in the interpretation of food advertisements. The pupils retained most of the gains made when tested one year after the experimental period.—*H. W. Karn* (Pittsburgh).

522. Blair, G. M. *Subject preferences of mentally superior and inferior senior high-school students.* *J. educ. Res.*, 1939, 33, 89-92.—A study of preferences by 1463 students at the Washington Senior High School, with IQ's ranging from 139 to 74. Superior students are those whose IQ's were one standard deviation or more above the group average (114 or higher—195 cases) and a similar criterion was used for establishing the inferior group (94 or lower—230 cases). Questionnaire answers indicated the subjects which were liked best and least. Mathe-

matics is the most liked subject for the superior boys. This preference drops from 32% for superior boys to 8% for inferior boys. The school subject most liked by the inferior boys is shop. English is the preference of the superior girls and home economics that of the inferior girls.—*S. W. Fernberger* (Pennsylvania).

523. Booth, H. *An experiment in leisure reading.* *Pittsb. Schs.*, 1939, 13, 141-148.—The author presents the results of a study of the leisure reading of 43 pupils enrolled in a 7A class in English, with a list of the books most frequently mentioned.—(Courtesy *J. educ. Res.*).

524. Bradbury, D. E., & Skeels, E. L. *A bibliography of nursery education; including references published between December 1, 1934, and January 1, 1939.* Detroit: National Association for Nursery Education, 1939. Pp. 68. \$0.40.

525. Carpentier, P. *Notions simples de psychologie et de psychiatrie utiles aux maitres pour connaître et diriger leurs élèves.* (Elementary concepts in psychology and psychiatry, for use by school teachers in understanding and guiding their students.) Toulouse: Thèse de Médecine, 1937. Pp. 78.

526. Cason, H. *An intelligent-question method of teaching and testing.* *J. genet. Psychol.*, 1939, 54, 359-390.—This method of teaching assumes acceptance of such "general psychological principles" as: (1) there are no clear psychological elements to which much of the material studied in college can be reduced, (2) facts and principles ought to be taught in the most meaningful setting possible, (3) material ought to be learned in the form in which it will be used, (4) recall and recognition are different psychological processes; and others. In discussing these principles the author attacks the use of so-called "new type" or "objective" tests in courses conducted by the lecture-reading-discussion method because the principles are violated, and suggests, instead, a method involving primarily the use of a mimeographed list of the topics to be discussed in a course, together with references and a list of 100-150 intelligent questions covering the whole course. Students are encouraged to use the material, and all tests and examinations are made up of questions selected from the list. The advantages of this technique are discussed and evidence cited to support the criticisms of "new type" tests.—*D. K. Spelt* (Mississippi).

527. Challman, R. C. *Personality maladjustments and remedial reading.* *J. except. Child.*, 1939, 6, 7-11.—Emotional factors producing maladjustments that militate against reading include emotional immaturity, lack of security, and severe punishment. Repeated failure in reading may also lead to such maladjustments as nervousness, withdrawal, negative aggressiveness, defeatism, and chronic worry. Remedial work done with poor readers must arouse pleasurable in the child and be rewarded with a feeling of success.—*L. A. Averill* (Worcester Teachers College).

528. Clark, E. L. Significance of month of birth as judged by test scores and grades. *Psychol. Bull.*, 1939, 36, 629.—Abstract.
529. Clifton, L. L. The textbook and workbook in learning to spell. *J. exp. Educ.*, 1939, 7, 274-276.—The standard spelling text used in this experiment did not have any certain value in helping pupils to learn to spell. The workbook operated as a handicap to all classes of pupils. "The standard textbook may have some value as a convenience; the workbook has no value unless it is in some phase of language other than spelling."—H. W. Karn (Pittsburgh).
530. Cook, D. C., & Nemzek, C. L. The effectiveness of teaching by radio. *J. educ. Res.*, 1939, 33, 105-110.—A comparison was made of the achievements of two equated groups of 150 white pupils each, attending the 8th and 9th grades in the Nolan Intermediate School, Detroit, Mich. One group listened to 15 educational programs broadcasted by a local radio station, while the second group was taught the same lessons but was not allowed to listen to the broadcasts. Students in both groups were tested before and after each lesson was presented. The results indicate that materials taught by the radio method were retained at least as well as those taught in a regular classroom situation.—S. W. Fernberger (Pennsylvania).
531. Corey, S. M., & Fahey, G. L. Some implications for pupil learning of teachers' classroom questions. *Psychol. Bull.*, 1939, 36, 635.—Abstract.
532. Disher, D. R. Attitude-interest analysis of Florida State College for Women students. *Psychol. Bull.*, 1939, 36, 616.—Abstract.
533. Dreese, M. The social adjustment of the under-age high school pupil and college student. *Psychol. Bull.*, 1939, 36, 601-602.—Abstract.
534. Durea, M. A., & Love, L. L. The personal problems of college students. *Occupations*, 1939, 18, 21-27.—207 women and 97 men (freshmen at the College of Education, Ohio State University) were given a personal traits inventory. Two scores from this inventory (number and intensity of problems) show little correlation with academic standing, intelligence, or admission blank score. Considerable statistical treatment of the data is presented. The use of scores for individual analysis is also considered.—H. Schlosberg (Brown).
535. Eames, T. H. A study of the incidence of eye defects and sex among poor readers. *J. educ. Res.*, 1939, 33, 102-104.—Tests for each eye separately were made on 443 poor readers, and defects were graded in accordance with predetermined standards. The girls presented a frequency of poor vision that was 23% greater than the boys. The results are analyzed into percentages for 10 different types of visual defect. The author concludes that "there was no parallel between frequency of eye defects and sex incidence."—S. W. Fernberger (Pennsylvania).
536. Fortes, M. Social and psychological aspects of education in Taleland. London: Oxford University Press, 1938. Pp. 64. 1/—.
537. Gates, A. I. Gates reading readiness tests. New York: Bur. Publ., Teach. Coll., Columbia, 1939. \$3.75 C.—These tests are designed "to measure readiness for beginning reading, to predict the rate of development of reading ability, and to diagnose the pupil's status and thus reveal his needs in each of several of the most important abilities required in learning to read." Five sub-tests are included, designed to measure different abilities important in reading. Norms in terms of percentile ratings are available for each sub-test and a composite score may be computed. Reliabilities determined by the split-half method fall between .78 and .96 for the various sub-tests and .974 for the whole test (Spearman-Brown correction).—M. Keller (Yale).
538. Gundlach, R. H. What governs the high school student in his preference for plays? *Psychol. Bull.*, 1939, 36, 648.—Abstract.
539. Harrison, M. L. Reading readiness at all educational levels. *Peabody J. Educ.*, 1938, 16, 167-175.—A program is discussed which includes provision for the development of the necessary concepts for constructing meanings, for the development of a precise vocabulary, and for the development in pupils of the ability to understand the specific material to be read.—N. B. Cuff (Eastern Kentucky).
540. Henry, L. K. The performance of adults of various grade levels in specific mental functions: a grade-by-grade comparison with school pupils. *J. educ. Res.*, 1939, 33, 93-101.—A study of 220 men in the Civilian Conservation Corps with a wide range of educational background. They were tested with revised forms of the Lauer Iowa State College comprehensive examination for vehicle operators, specifically for arithmetic, vocabulary, auto-mechanics, and psychoneurotic tendencies. The results were compared with those from 380 pupils from the last grades reached by the men in the C.C.C. The pupils obtained higher scores than the adults in all grades on the arithmetic and vocabulary tests, with a steady increase in scores for each grade level for both groups. For the auto-mechanics test the differences are smaller, and the adults are superior from the 5th through the 9th grades, while the pupils are superior for the 4th, 10th, 11th, and 12th grades. In personality balance there seems to be a deficiency in adults below the 7th-grade level.—S. W. Fernberger (Pennsylvania).
541. Hicker, H. D. Coordination of services for vocational adjustment of the deaf. *Amer. Ann. Deaf*, 1939, 84, 322-331.—C. V. Hudgins (Clarke School).
542. Hites, L. T. The marriage course as a psychology department offering. *Psychol. Bull.*, 1939, 36, 624.—Abstract.
543. Johnson, E. H. Testing the results of acoustic training. *Amer. Ann. Deaf*, 1939, 84, 223-

233.—A 5-point testing program covering drill vocabulary, speech intelligibility, acoustic understanding, acoustic understanding combined with lip-reading, and lip-reading is described, and results are presented for 102 deaf children in Grades 2 to 9. Methods of scoring the tests are described. A high degree of correlation was found between the scores made on all except the drill vocabulary tests.—*C. V. Hudgins* (Clarke School).

544. Leavell, U. W., & Sterling, H. A. A comparison of basic factors in reading patterns with intelligence. *Peabody J. Educ.*, 1938, 16, 149-155.—191 6th-grade children, the Kuhlmann-Anderson test, Myers mental measure, an ophthalmograph, the Monroe silent reading test, and the Keystone telebinocular were used in this study. The data indicate a fairly marked tendency for the less intelligent children to make more regressions, to make more fixations, to have lower rate and comprehension scores, and to have a narrower span of recognition than the more intelligent.—*N. B. Cuff* (Eastern Kentucky).

545. Lentz, T. F. Evidence for a science of recreational guidance. *Psychol. Bull.*, 1939, 36, 623.—Abstract.

546. Logasa, H. The school library in the reading program. *Peabody J. Educ.*, 1938, 16, 220-226.—"Libraries depend on the schools for developing a reading audience."—*N. B. Cuff* (Eastern Kentucky).

547. Mackenzie, D. M. Placement tests and freshman week. *Sch. & Soc.*, 1939, 50, 351-352.—To determine whether or not test results during freshman week are invalidated by the students' lack of adjustment to a new environment at this time, a representative sampling of freshmen were retested after five months by another form of the same test. There was a gain of .67 in the mean scores, which is statistically insignificant. Between the two sets of scores the correlation was .87. In only a few cases did individuals for special reasons gain or lose over 10 points.—*M. Lee* (Chicago).

548. McBroom, M. [Ed.] Newer practices in reading in elementary schools. *Yearb. elem. Sch. Prin.*, 1938, 17, No. 7. Pp. 704.—51 authors express opinions on how to teach reading and methods for correcting reading disorders in elementary school. A chapter on speech aspects of reading readiness will interest speech correctionists. The volume contains 245 references.—*C. V. Hudgins* (Clarke School).

549. McCandless, B. R. The effect of enriched educational experiences upon the growth of intelligence of very superior children. *Psychol. Bull.*, 1939, 36, 628.—Abstract.

550. McCaul, M. E. Guidance for college students. Scranton, Pa.: International Textbook Co., 1939. Pp. xiii+231. \$1.80.

551. Meyer, M. F. Shorthand in the education of a deaf-born child. *Psychol. Bull.*, 1939, 36, 599-600.—Abstract.

552. Milisen, R. L. Introducing speech correction into a new school system. *J. Speech Disorders*,

1939, 4, 241-245.—Discussion of the problems facing those who attempt to establish a speech correction program in new school systems, and some suggestions as to how this may be done with a minimum of friction and with maximal benefit to the children.—*C. V. Hudgins* (Clarke School).

553. Moore, C. C. The elementary school mark. *J. genet. Psychol.*, 1939, 54, 285-294.—For nearly 200 5th- and 6th-grade pupils in two western states, scores were obtained on the New Stanford Achievement Test and the Otis Group Intelligence Scale, for correlation with teachers' marks awarded in language and literature, mathematics, reading, and social science. Correlations were lowest between marks and achievement scores (*r*'s from .39 in social science to .60 in mathematics), somewhat higher between marks and intelligence scores (from .47 in reading to .67 in language), and still higher between achievement and intelligence scores (from .54 in social science to .74 in reading). The author concludes that more attention should be paid to the measuring devices employed by teachers and to the circumstances under which standardized tests may yield adequate information.—*D. K. Spelt* (Mississippi).

554. Moore, J. E. The significance of individual differences in relation to reading. *Peabody J. Educ.*, 1938, 16, 162-166.—"We cannot continue to speak of reading ability. . . . Pupils with like scores on a test of reading achievement differ markedly in certain reading skills and abilities. . . . The differences between individuals on any complex function, such as reading, should increase rather than decrease with practice and training."—*N. B. Cuff* (Eastern Kentucky).

555. Mueller, J. A. Adjusting the below-average pupil. *Occupations*, 1939, 18, 98-100.—A discussion of the training of the subnormal student in a technical secondary school. Formal programs and prerequisites should be disregarded in an attempt to find and concentrate on the development of a specific skill in a field for which the student shows or develops interest. The viewpoint is illustrated by two extreme cases.—*H. Schlosberg* (Brown).

556. Newbury, E. Laboratory exercises in animal behavior. *Psychol. Bull.*, 1939, 36, 594-595.—Abstract.

557. Odell, C. W. Present tendencies in educational measurement. *Bull. Sch. Educ. Ind. Univ.*, 1939, 15, No. 4, 10-24.—Modern tendencies in educational measurement emphasize larger objectives, new types of instrument, and content in tests, scales and questionnaires; there is increasing use of instruments in measuring outcomes of teaching and the efficiency of educational tools; there is greater professionalization of test construction and distribution and more critical evaluation.—*C. M. Louttit* (Indiana).

558. Odell, C. W. Some assumptions underlying the educational measurement movement. *Bull. Sch. Educ. Ind. Univ.*, 1939, 15, No. 4, 39-50.—McCall's 17 theses underlying educational measurement are discussed and accepted. The author then

calls attention to certain further assumptions implicit in the work in educational measurements, many of which are probably incorrect and need careful study and revision.—C. M. Louttit (Indiana).

559. Peet, E. Gallaudet: seventy-five years of higher education for the deaf. *Amer. Ann. Deaf*, 1939, 84, 198-211.—C. V. Hudgins (Clarke School).

560. Pietrusky, E. Die Bedeutung religiöser Bindung für die Erziehung weiblicher junger Gefangener. (The significance of religious affiliation for the education of young female prisoners.) Weimar: Böhlau, 1939. Pp. 62. RM. 2.60.

561. Pitts, C. L. A partial report of a study of failures in the first year of high school. *Peabody J. Educ.*, 1938, 15, 362-369.—A study made over a period of 4 years in a town of 30,000 people included teachers' ratings, standard tests, health records, and other estimates which were likely to reveal the causes of failures in high school. 7 conclusions are given, including the following: "No one can foretell what a child will do in high school. . . . There are more and varied factors entering into success than ability to do the work. . . . Each failure is a case unto itself."—N. B. Cuff (Easter Kentucky).

562. Pratt, M. Reflections of a headmistress on vocational guidance. *Occup. Psychol., Lond.*, 1939, 13, 285-294.—Some of the difficulties in girls' choices of a career are: (1) Parents' objections to additional expenditure on professional training when marriage may destroy its value. However, at least one in ten of those who marry will be obliged to help support herself or her family. (2) The number of professions virtually closed to women, or in which they would be pioneers. (3) Girls' eagerness to choose work too difficult or too easy, because of their consideration of social values. Specific instances of the value of tests, particularly general intelligence tests, are given.—H. Moore (Mt. Holyoke).

563. Reinöhl, F. Vererbung und ihre Bedeutung für die Erziehung. (Heredity and its significance for education.) Oehringen: Hohenlohe'sche Buchh., 1939. Pp. 240. RM. 5.40.

564. Rigg, M. G. The relation of college achievement tests to grades and to intelligence. *J. educ. Psychol.*, 1939, 30, 397-400.—A table shows correlations between intelligence and first semester scholarship (average $r=.52$), intelligence and four years' scholarship (average $r=.43$), intelligence and achievement scores (average $r=.53$), and achievement scores and four years' scholarship (average $r=.47$) for seven different graduating classes. The numbers of subjects used for computing the various correlations ranged from 24 to 112.—R. M. Bellows (Maryland).

565. Rust, M. M. The training of psychological counsellors. *J. consult. Psychol.*, 1939, 3, 144-146.—Suggestions for the training of counsellors, with special emphasis on work with young children.—P. S. de Q. Cabot (Simmons).

566. Ryans, D. G. Some observations concerning the relationship of time spent at study to scholar-

ship and other factors. *J. educ. Psychol.*, 1938, 30, 372-377.—Time reported spent at study was found to correlate .37 with college marks of 40 junior-college sophomores studied. The same variables have been found to correlate .32, .00, -.06, and -.28 by previous investigators. Measured time spent on a limited assignment was found to correlate .21 with scholarship and .48 with an intelligence index. Persistence as measured was found to correlate .56 with reported study time and -.13 with intelligence. Bibliography.—R. M. Bellows (Maryland).

567. Ryans, D. G. The role of guidance in education. *Sch. & Soc.*, 1939, 50, 345-348.—The author calls attention to the need for student guidance in education which has as its aim "effective adjustment of the adult to his physical and social environments," especially under present conditions of highly competitive stress. Many schools do not use to their fullest advantage the best techniques available, but even with their use the vocational information obtained is largely negative and incapable of predicting the success or failure of the highly complex individual. This situation presents a challenge to further study and research.—M. Lee (Chicago).

568. Slater, P., & Thomson, G. H. Factor analysis and vocational guidance. *Occup. Psychol., Lond.*, 1939, 13, 302-309.—Discussing the question raised in Thomson's book, *The Factorial Analysis of Human Abilities*, "Toward what goal should research in vocational guidance be directed?" Slater postulates three steps that are necessary for a scientific basis for any guidance program: (1) discovering the chief unitary psychological traits which determine an individual's ability to succeed in different occupations, (2) devising tests to measure these abilities as purely and directly as possible, (3) correlating success in the tests with success in the occupations. For the first two of these steps factor analysis is indispensable; without it batteries of tests, most of which are shrewd guesses, will have to be given each candidate for every known occupation; with it the counselor can use "one broad battery of tests, each measuring a different unitary ability which plays an independent part in determining success or failure in a number of occupations. From the relation between an individual's scores in the different tests, it would then be possible to make an estimate of his relative likelihood to succeed in a great many different occupations." This defense of factor analysis is in reply to Thomson's claim that "to estimate factors from tests and then occupations from factors can never be more accurate than to take a direct estimate from tests to occupations." Thomson's reply is that "unitary abilities" is an equivocal term, and that tests of them are pure only in the sense that they do not contain certain other group factors.—H. Moore (Mt. Holyoke).

569. Slavson, S. R. Character education in a democracy. New York: Association Press, 1939. Pp. xii+226. \$2.50.—"The major function of

education today is to prepare and motivate people for building a progressive democratic society. . . . Character training and personality development proceed from initiation, self-direction, and informality." This book is an effort to describe the philosophy of and the procedure for an integrative educational technique which utilizes the primary group. The argument is divided into 12 chapters: the conflict between character and culture; social roots of "human nature"; education for a dynamic society; group dynamics; individual resources; corrective efforts; personality development as an educational aim; education for social action; other educational objectives; gradations in adult education; and majority and minority group attitudes.—*J. McV. Hunt* (Brown).

570. **Smith, J. J.** Reliability of scoring an academic test to which the examinees responded by writing sentences. *J. educ. Res.*, 1939, 33, 81-88.—Description of an examination in psychology which takes 53 minutes and in which 18 of the 20 questions require specific and concrete statements of facts so that they may be answered in a single sentence. There was little difference between the scoring of the teacher without a key and the scoring of a student assistant with a test key. Correlation coefficients for the different methods of scoring were between .82 and .89.—*S. W. Fernberger* (Pennsylvania).

571. **Stevenson, I.** Some factors affecting the change of attitudes of college freshmen. *Psychol. Bull.*, 1939, 36, 626-627.—Abstract.

572. **Stone, C. R.** Better primary reading. St. Louis: Webster, 1936. Pp. 536. \$2.25.—An attempt is made to apply research findings to the practical problem of preventing reading disabilities. Topics discussed are: better reading, a flexible course of study, a graded vocabulary for primary reading, eye movements in reading, better balance in beginning methods, word recognition, prevention, diagnosis and instruction of problem cases in reading.—*C. V. Hudgins* (Clarke School).

573. **Strang, R.** Bibliography relating to reading on the high school and college level. New York: Teach. Coll., Columbia Univ., 1938. Pp. 194. \$1.50.—The material is divided into 19 chapters of annotated bibliographical references, with indications as to whether the references are general or specific.—*C. V. Hudgins* (Clarke School).

574. **Thacker, E. A.** A study of ocular defects among university students. *Amer. J. Ophthalm.*, 1939, 22, 1003-1011.—A detailed statistical study made by the University of Illinois health service showed that 34.3% of the male student body had defective vision. Of this group, 30.2% did not attain normal acuity with glasses, and 38.2% showed increase in their visual defect after entrance to the university, suggesting that excessive use of the eyes may be a factor in aggravating an existing visual defect. Types of ocular defects are tabulated; and the relationship of foci of infection and childhood diseases to defective vision is discussed.—*D. J.*

Shaad (Institute of Ophthalmology, New York City).

575. **Tibbitts, F. L.** Occupational guidance for youth. Part I. Finding yourself. Oklahoma City: Harlow Publ. Corp., 1939. Pp. 29. \$0.25.

576. **Walsh, E. A.** The slow-learning child in our public schools. *J. excep. Child.*, 1939, 6, 12-15.—While in many ways the needs of the mentally retarded child are not different from those of the normal child, he has been found to be a little more prone to infectious disease, to impairment of the central nervous system, and to accidental injury. The author explains the operation of the Bureau for Children with Retarded Mentality of the New York City schools and something of its technique in handling backward children.—*L. A. Averill* (Worcester Teachers College).

577. **Washburn, S. M.** The relative difficulty of the number combinations in 1937, as determined by repeating Clapp's investigation. *Pittsb. Schs.*, 1939, 13, 133-140.—The author presents a repetition of the Clapp investigation of number combinations, from which he concludes that the results of the two investigations are very similar.—(Courtesy *J. educ. Res.*)

578. **Wheeler, L. R.** A comparative study of the difficulty of the 100 addition combinations. *J. genet. Psychol.*, 1939, 54, 295-312.—A test of the 100 addition combinations (in both column and equation forms) was given to 125 2nd-grade pupils (median IQ 103). For 10 consecutive days pupils played a standard arithmetic game which provided teaching and drilling as a play activity. The same test was then repeated. After a second 10-day period using the game, the final test was given. From an initial knowledge of 10 or 12 combinations (median scores on equation and column forms of test I), pupils progressed to a knowledge of 35-45 combinations at the end of 10 days and to a knowledge of 55-61 combinations at the end of 20 days. Median scores on the equation form of the test were uniformly lower. On the basis of difficulty rankings for each combination, results of the study are compared with those of other similar investigations and the order of difficulty is shown to be more closely related to size of addend than to size of sum. Educational implications of the results are discussed briefly.—*D. K. Spelt* (Mississippi).

579. **Whipple, G. M.** Causes of retardation in reading and methods of eliminating them. *Peabody J. Educ.*, 1938, 16, 191-200.—The writer holds that many different factors underlie retardation in reading. Several personal causes are listed, such as low intelligence, sensory defects, emotional factors, inferior language equipment, lack of experience, and poor home environment.—*N. B. Cuff* (Eastern Kentucky).

580. **Whisler, L.** Differences among groups of former students at the University of Louisville. *Psychol. Bull.*, 1939, 36, 633.—Abstract.

581. **Williamson, E. G.** Training and selection of school counselors. *Occupations*, 1939, 18, 7-12.—This address to the National Vocational Guidance

Association urges higher standards for the selection and training of counselors. These matters are discussed in some detail. Certification is also suggested.—*H. Schlosberg* (Brown).

582. **Wilson, N. A. B.** A vocational advisor's case work. *Occup. Psychol., Lond.*, 1939, 13, 258-267.—From a survey of the reports of 250 case records of one counselor a summary is made of the types of problems that a counselor must face. Some of these were: (1) The majority of advisees were normal public-school graduates, and the percentage of recommendations for the different fields closely followed that of the Headmasters' Employment Committee, i.e., the majority were advised to find office positions, some form of engineering or production technique came second, and the professions third. The counselor had a greater percentage of recommendations for surveying and real estate; and for some types of work, e.g. neon-sign draftsmanship, the recommendation was given only once. (2) 20% of the group were already employed and were thought to be misfits; of these 10% needed only assurance of their capacity, and the remainder were unfitted because of unsuitable physique, inadequate or superior intelligence, insufficient skill or technical training, and/or failure to consider temperamental qualifications. (3) About 50% of the suggestions tentatively put forward by parents or the advisee had to be vetoed. (4) About 5% of advisees were advised to visit a psychotherapist, and about 30% return for supplementary justification of the proposed program.—*H. Moore* (Mr. Holyoke).

583. **Wise, J. H.** A college reading program in practice. *Peabody J. Educ.*, 1938, 16, 227-234.—Data are presented which show that 33% of the freshmen at the University of Florida during a 3-year period were visually handicapped. After corrective exercises or adjustments brought about by glasses, they engaged in a special speed project, and some individuals increased their rate more than 100%.—*N. B. Cuff* (Eastern Kentucky).

584. **Woody, C.** Attempts at measurement of meaningful experience as a factor conditioning achievement in reading. *Peabody J. Educ.*, 1938, 16, 180-190.—The writer discusses several measures of meaningful experience, such as size of vocabulary, richness of vocabulary, vocabulary load of reading assignments, picture naming, and imagery tests.—*N. B. Cuff* (Eastern Kentucky).

[See also abstracts 127, 351, 380, 400, 408, 419, 464, 505, 507, 588, 593.]

MENTAL TESTS

585. **Bläsch, H.** Testreihen zur Prüfung von Schweizerkindern. (Series of tests for use with Swiss children.) *Frauenfeld: Huber*, 1938. Fr. 5.—*P. L. Krieger* (Leipzig).

586. **Curtis, E. E., Fuller, H. B., & Porter, J. P.** Test-retest reliabilities of mental ability, school achievement, and personality traits. *Psychol. Bull.*, 1939, 36, 636.—Abstract.

587. **Drake, R. M.** Work book in mental tests. Macon, Ga.: Author, 1939. Pp. 1+37.—This work book is designed for use with the text "Mental Tests" by Frank N. Freeman. Each of the 15 units consists of a series of questions and exercises on the material presented in the text, together with occasional suggestions for reports and additional readings. The book is intended as a guide to class discussion and an aid to the student, rather than as a method of quizzing.—*M. Keller* (Yale).

588. **Duffy, E.** Values scores in predicting vocational interest scores and college grades. *Psychol. Bull.*, 1939, 36, 616-617.—Abstract.

589. **Loevinger, J.** A formalized method for constructing objective examinations. *Psychol. Bull.*, 1939, 36, 646.—Abstract.

590. **Mann, C. W.** A test of general ability in Fiji. *J. genet. Psychol.*, 1939, 54, 435-454.—A non-verbal test, using pictures and geometrical designs, was constructed to include, as sub-tests, completions, classifications, similars, opposites, analogies, number series, and substitutions. It was administered to more than 4000 school children (principally Fijians and Indians) from 8 yr. 6 mo. to more than 16 yr. 6 mo. of age. Statistical treatment of the scores indicates that it is a valid and reliable measure of general ability for Fijians and Indians, but no racial comparisons of importance can be made at present.—*D. K. Spelt* (Mississippi).

591. **Munson, G., Saffir, M. A., & Chamness, H. U.** An objectified practical test for clinical psychologists. *Psychol. Bull.*, 1939, 36, 637.—Abstract.

592. **Somers, G. T.** Reliability of the categorized and uncategorized test. *Bull. Sch. Educ. Ind. Univ.*, 1939, 15, No. 4, 30-38.—The Odell test of mental capacity was mimeographed in its original uncategorized and in a categorized form, and each form was presented to a total of 172 college and 182 high school students. Correlation between the scores on the two forms and comparison of means give no evidence of special merit of either form over the other.—*C. M. Louttit* (Indiana).

593. **Thomson, W. A.** Retest results on the A. C. E. psychological examination. *Psychol. Bull.*, 1939, 36, 636.—Abstract.

594. **Wood, L., & Kumin, E.** A new standardization of the Ferguson form boards. *J. genet. Psychol.*, 1939, 54, 265-284.—Using Plant's standard method of presentation and a newly revised scoring plan by Shimberg, the 6 Ferguson form boards were given to 3012 children, ranging in age from 7 yr. 6 mo. to 17 yr. 5 mo. 91% of these cases were seen at a guidance clinic; the remainder were public school children added at the younger levels. Children who had a Stanford-Binet IQ less than 80, were retarded more than 2 yr. in school, or gave any indication of unreliable performances were excluded. Percentiles were computed for each sex at each age level from 8 to 17 yr. inclusive. Girls' scores were consistently and progressively lower than boys' scores as age increased. Correlation between MA and Ferguson

score for groups of normal and superior intelligence ranged from .42 to .55; between CA and Ferguson score (with MA held constant) r 's were .17 for boys and .04 for girls. A special group of retarded children (382 cases) yielded definitely lower r 's for MA and Ferguson score.—D. K. Spelt (Mississippi).

[See also abstract 206.]

CHILDHOOD AND ADOLESCENCE

595. Ames, L. B. Some relationships between stair climbing and prone progression. *J. genet. Psychol.*, 1939, 54, 313-325.—Cinemanalysis of records of stair climbing and prone progression in 12 S's, covering 1-3 years of life, showed that the activities display highly similar patterns. Stair climbing typically begins with placement of the left foot on the first stair; then the left hand and right foot advance almost simultaneously. Further climbing consists of the simultaneous progression of contralateral pairs of limbs. Creeping differs chiefly in the initial movement, involving a contralateral pair of limbs in place of the single limb of stair climbing. Descent differs from ascent patterns in body orientation and posture, and usually involves fewer limbs moved in different sequence. Quantitative analyses of the patterns are included to show that patterns within a single case are relatively constant, although individuals differ.—D. K. Spelt (Mississippi).

596. Anderson, H. H. Domination and social integration in the behavior of kindergarten children in an experimental play situation. *Psychol. Bull.*, 1939, 36, 628.—Abstract.

597. Bailey, E. W., & others. Study of child in preschool. Workbook 1; to be used in connection with *Studying children in school*. (2nd ed.) New York: McGraw-Hill, 1939. Pp. 40. \$0.50.

598. Bailey, E. W., & others. Study of child in elementary school. Workbook 2; to be used in connection with *Studying children in school*. (2nd ed.) New York: McGraw-Hill, 1939. Pp. 35. \$0.50.

599. Bailey, E. W., & others. Study of youth in secondary school. Workbook 3; to be used in connection with *Studying children in school*. (2nd ed.) New York: McGraw-Hill, 1939. Pp. 39. \$0.50.

600. Baxter, E. D. Baxter group test of child personality. *Psychol. Bull.*, 1939, 36, 629-630.—Abstract.

601. Benton, A. L., & Hagmann, E. A. Psychometric test results in two cases of precocious puberty. *J. genet. Psychol.*, 1939, 54, 455-456.—A girl 4 yr., 5 mo. old, with a 2-year menstrual history, had an MA of 4 yr., 10 mo. (IQ 109) on the Stanford-Binet. A second girl, 9 yr. 9 mo. old, who began to menstruate at the age of 7 mo., had an MA of 9 yr., 8 mo. (IQ 99).—D. K. Spelt (Mississippi).

602. Bernard, J. The neighborhood behavior of school children in relation to age and socio-economic status. *Amer. sociol. Rev.*, 1939, 4, 652-662.—"In

a group of 420 urban school children, there was found to be a definite tendency for neighborhood attachment to decline with age. The greatest relative decline tended to occur at about the age of 17 among middle-class children, perhaps somewhat earlier—at about 15—among upper-class children. . . . The children in the lower socio-economic group tended to show more neighborhood attachment than the children in the higher socio-economic group. . . . Within wide limits of probable error, it may be said that age was perhaps more important than socio-economic status in its influence upon neighborhood activity, whereas socio-economic status was more important than age in its effect upon neighborhood attitudes."—J. L. Child (Harvard).

603. Champney, H. Some measurable aspects of the child's home environment. *Psychol. Bull.*, 1939, 36, 628-629.—Abstract.

604. Cooper, C. D. The reactions of sixth grade children to commercial motion pictures as a medium for character education. *J. exp. Educ.*, 1939, 7, 268-273.—This study reports the reactions of sixth grade children to feature pictures which they had seen during a four-week period prior to the investigation, in which an interview and questionnaire-test technique were used. The subjects learned to be courteous, considerate, and careful as the result of seeing features where these attitudes were stressed. Their manners improved; they became more polite and patriotic; and they became more reverent, respectful, and truthful. They improved their dress, posture, and health as the result of the pictures they had seen. Factors influencing the character education values derived from seeing the pictures include: economic status, size of family, nationality, religion, and neighborhood.—H. W. Karn (Pittsburgh).

605. Davis, E. A. Accuracy versus error as a criterion in children's speech. *J. educ. Psychol.*, 1938, 30, 365-371.—Reports based on frequency of error alone were found to be misleading and inadequate.—R. M. Bellows (Maryland).

606. DeBoer, J. J. Radio and children's emotions. *Sch. & Soc.*, 1939, 50, 367-373.—Since the radio is listened to by children from 2½ to 3½ hours a day it inevitably plays a large part in their education. Yet it is conducted almost entirely on a commercial basis, with little consideration for its effect on the listeners. Experiments have shown that children respond emotionally to situations presented which show action and conflict, but no more if these involve strange than if they involve familiar animals and incidents. Such physiological response often repeated may be harmful to some children, but to others may be only tonic. Again, as it has been shown that movies modify children's attitudes; it may be assumed that radio programs have a similar power. The most serious criticism of radio programs for children is their banality. If radio producers would employ skilled writers of children's fiction and would concern themselves (though not too narrowly) with the real help radio drama could

give by vicariously solving some immediate childhood problems (some of which are suggestively listed) they would make a great contribution to education.—*M. Lee* (Chicago).

607. **Dennis, W.** Is infant behavior appreciably affected by cultural influences? *Psychol. Bull.*, 1939, 36, 598-599.—Abstract.

608. **Dunmire, H.** An evaluation of Beck's norms as applied to young children. *Psychol. Bull.*, 1939, 36, 629.—Abstract.

609. **Hinton, W. M.** A study of the adjustment behavior of elementary school children. *Psychol. Bull.*, 1939, 36, 600-601.—Abstract.

610. **Horowitz, E. L., & Smith, R. B.** Social relations and personality patterning in preschool children. *J. genet. Psychol.*, 1939, 54, 337-352.—After suitable training programs, teachers observed the free-play activities used by each pupil for 30-second periods on successive days, until 20 records per child had been made. Activity was recorded immediately after each observation on a standard form. Analysis of the data suggests that the organization of children's behavior "is in terms of general activity-inactivity rather than patterns in accordance with social-ethical norms. The effect of nursery school training seems to be to increase active forms of behaving and decrease inactive forms."—*D. K. Spelt* (Mississippi).

611. **Hunsinger, G.** A comparative study of the mortality of deaf school children in school and out, 1844-1937. *Amer. Ann. Deaf*, 1939, 84, 248-259.—*C. V. Hudgins* (Clarke School).

612. **Jones, H. E.** Experimental studies of children's learning, II. (Film.) Berkeley: Univ. California, 1939. 1 reel, 400 feet, 16 mm. \$30 sale.—Four learning experiments are illustrated, including the setting up of the apparatus and the administration of serial tests to children. An electrically recording mirror maze, a recording slot maze, and two types of punchboard mazes are shown, the latter providing differential recording for errors and successful movements.—*H. E. Jones* (California).

613. **Kounin, J. S.** The comparative rigidity of different chronological age groups with equal mental ages. *Psychol. Bull.*, 1939, 36, 628.—Abstract.

614. **Lunger, R., & Page, J. D.** Worries of college freshmen. *J. genet. Psychol.*, 1939, 54, 457-460.—100 college freshmen of each sex marked a "worry inventory" of 78 items. Sex differences appeared for certain items, but not for the total number of worries reported. Self-ratings on a superiority scale were lower for worriers than for non-worriers, but maladjustment scores were higher.—*D. K. Spelt* (Mississippi).

615. **McPherson, O.** Summer vacation activities of 100 farm boys and girls in a selected area. New York: Teach. Coll., Columbia Univ., 1939. Pp. viii+74. \$1.25.—50 boys and 50 girls living in a county in a middle western state were studied to discover and present a picture of summer vacation activities and to suggest procedures to enhance their

educational significance. It is concluded that neither home, school, nor any other agency offered special provisions for a summer vacation for these children, and that the latter's interests and needs were secondary to those of adults in any planning of the summer recreation. No vital educational purposes were served by the school in the summer program. It is suggested that closer cooperation between home and school is necessary, that closer contact be made with farming procedures, that existing library facilities and school playgrounds be used more, and that hobbies be pursued and increased experience obtained with natural resources and beauty.—*P. S. de Q. Cabot* (Simmons).

616. **Meltzer, H.** Children's thinking about nations and races. *Psychol. Bull.*, 1939, 36, 638.—Abstract.

617. **Ojemann, R. H.** Seven years of child study by radio. An application of a policy for educational broadcasting. *Sch. & Soc.*, 1939, 50, 353-357.—The Iowa Radio Child Study Club has for 7 years broadcasted programs which are produced cooperatively by the State University of Iowa, Iowa State College, and Iowa State Teachers' College. Four 2-year courses (family, infant and preschool, elementary, and adolescent) of 12 broadcasts each are offered. The techniques used are talks, interviews, dramatizations, and round-table discussions. Listeners are urged to organize themselves into groups of 10 under a leader, enroll and register, and receive lists of references for reading and discussion. The advantages of this type of educative procedure are that it shortens the time lag between research findings and their application, that the channel is readily adaptable to changing needs and subject to improvement, that it utilizes already existing local interested agencies and organizations, that it has a preventive rather than a remedial function in parent training, and finally that it avoids the duplication and mediocrity so often found in educational broadcasts.—*M. Lee* (Chicago).

618. **Pearson, G. H. J.** The chronically aggressive child. *Psychoanal. Rev.*, 1939, 26, 485-525.—Three cases demonstrating chronic aggression are described. Aggressive impulses are said to be instinctual in origin. Against these impulses defences must be erected to allow for social adaptation. 20 methods of defence observed in a group of 64 children, ages two to four, are described. Chronic aggression is said to arise from (1) excessive aggressive drive, (2) brain injuries to certain cortical areas, (3) guilt feelings, (4) total or partial rejection of the child by the parents. The fate of the aggressive child may be (1) the erection of obsessional defence mechanisms, (2) use of a paranoid reaction, (3) a turn to sadism, (4) an attempt to shift the burden of the problem to the social group. Therapy must be aimed "at removing the fear and anxiety which is interfering with the child's capacity to love and be loved." Difficulties and dangers in treatment are discussed.—*C. N. Cofer* (Brown).

619. Russell, R. W. The development of animistic concepts in the child. *Psychol. Bull.*, 1939, 36, 600.—Abstract.

620. Sakellariou, G. *Psychologia tou ephevou*. (Psychology of the adolescent.) Athens: Xenos & Co., 1939. Pp. 335.—This is the first book published in Greek on adolescence in Greece; it is based on results of investigations of 2000 boys and girls, 12-21 yr. of age. The main problems discussed are: prepuberty; physiological development; appearance of puberty in Greece; the emotional life and its analysis; mental development and its processes; social development; adolescent interests, ideals, dreams, and day dreams; special interests (emancipation, love and sex interest, vocational interests and guidance of youth); moral, philosophical, and religious development; personality and its diagnosis; crime in Greek youth; the problem of penal responsibility; the adjustment of youth and its mental anomalies; youth and its schools.—G. Sakellariou (Thessaloniki).

621. Sakellariou, G. *Hai anysychiai kai ta pneumatika symplegmata ton Hellenon ephevon*. (Anxieties and complexes of Greek youth.) *Sci. Annu. Sch. Phil., Univ. Thessaloniki*, 1939. Pp. 12.—2000 boys and girls were examined personally by the author to find out their anxieties and mental complexes. Some results: In boys anxieties increase in number with the age of the individual, in girls they diminish except at 15-17 yr. Adolescents of 12-14 yr. are anxious mostly about their studies and future, at age 15-17 about studies, future, love affairs, and fear of poverty; at age 18-20, in addition to the above anxieties, they worry very much about their future and marriage. Adolescents feel the need of enlightenment on the following anxieties and doubts: boys of 12-17 yr., school progress and success in love; girls of 12-17 yr., difficult life situations, school progress, and happy and virtuous life.—G. Sakellariou (Thessaloniki).

622. Shock, N. W., & Jones, H. E. The relationship between basal physiological functions and intelligence in adolescents. *Psychol. Bull.*, 1939, 36, 642-643.—Abstract.

623. Sollenberger, R. T. The concept of adolescence. *Psychol. Bull.*, 1939, 36, 601.—Abstract.

624. Speer, G. S. Oral and written wishes of rural and city school children. *Psychol. Bull.*, 1939, 36, 626.—Abstract.

625. Stott, L. H. Home setting as a factor in the problem of the only vs. the non-only child. *Psychol. Bull.*, 1939, 36, 630-631.—Abstract.

626. Symonds, P. M. A study of parental dominance and submission. *Psychol. Bull.*, 1939, 36, 540-541.—Abstract.

627. Symonds, P. W. The psychology of parent-child relationships. New York: Appleton-Century,

1939. Pp. xiv+228. \$2.00.—Divided into 7 chapters, "this book deals with the problem of emotional security and its significance in the development of personality." Chapter I surveys the literature pertaining to basic concepts in parent-child relationships, with particular reference to studies of parental rejection and overprotection, and child behavior resulting from parental attitudes. Chapters II and III present new evidence based on approximately 30 pairs of cases concerning the effects of emotional security and insecurity on the personality development of children with dominating and submissive parents. An analysis of clinical case studies is reported in Chapter IV. Chapter V is concerned with the varieties and etiology of parent-child relationships and a description of the conditions favorable to emotional security in the home. Chapters VI and VII present teacher-pupil and counselor-client relations respectively. Throughout, emphasis is placed upon the importance of personal relationships in human affairs and the significance of parent-child relationships in personality development, successful learning and individual therapy.—P. S. de Q. Cabot (Simmons).

628. Ter Keurst, A. J. Comparative differences between superstitious and non-superstitious children. *J. exp. Educ.*, 1939, 7, 261-267.—An analysis of comparative data from superstitious and non-superstitious secondary school children leads the author to conclude that "superstitiousness is characteristic of that vicious circle which includes an unfavorable socio-economic status, inadequate mental development, lack of social adjustment, and insufficient personality adjustment."—H. W. Korn (Pittsburgh).

629. Tryon, C. M. Comparisons between self-estimates and classmates' estimates of personality during adolescence. *Psychol. Bull.*, 1939, 36, 568.—Abstract.

630. Wagner, I. F. Curves of sleep depth in newborn infants. *J. genet. Psychol.*, 1939, 55, 121-135.—Polygraph records were secured from 40 infants, 8-233 hrs. old, during the interval between 2 afternoon feedings. Classification of the records from minute to minute in terms of 7 stages of depth of sleep, and analysis of the results, showed that: (1) sleep curves are highly variable from infant to infant and for any given infant; (2) this variability decreases somewhat for the individual during the first 10 postnatal days; (3) incidental phenomena, such as yawning, sneezing, and regurgitation, were most likely to occur during complete waking and never appeared in the 3 deepest sleep stages. Several curves of sleep depth are included.—D. K. Speli (Mississippi).

[See also abstracts 63, 168, 177, 244, 254, 265, 295, 301, 305, 313, 451, 456, 514, 517.]

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